## GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT(GITAM) (Deemed to be University) VISAKHAPATNAM \* HYDERABAD \* BENGALURU

Accredited by NAAC with A<sup>+</sup> Grade



## CURRICULUM AND SYLLABUS

OF

BBA(BA)

(for 2021-22 admitted batch)

# **Academic Regulations**

Applicable for the Undergraduate programmes in the Faculties of Engineering,

Humanities, Management and the Sciences

https://www.gitam.edu/academic-regulations

#### Bachelor of Business Administration (BA) (Effective from academic year 2021-22 admitted batch) PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1	To develop individuals with conceptual knowledge in the multiple disciplines of analytics comprising of mathematics, statistics, information technology and management
PEO 2	To develop individuals who can pursue career in the area of analytics and continue their professional development by obtaining masters degree specializing in different domains related to analytics.
PEO 3	To develop individuals who can apply analytics tools and techniques to solve business analytics problems.
PEO 4	To imbibe value-based education to the students that will help them to function effectively in their business analytics career.
PEO 5	To train the students in emerging as efficient managers equipped with innovation, rationality.

### PROGRAM OUTCOMES(POs) AND PROGRAM SPECIFIC OUTCOMES(PSOs):

At the end of the program the students would be able to:

PO1	Acquire adequate knowledge through principles, theories and models of business
	management, Accounting, Marketing, Finance, IT, Operations and Human Resource.
PO2	Demonstrate proficiency for Business Communication for effective and professional business
102	management.
PO3	Acquire employability skills through practical exposure of IT and its usage in different
	domains of management
	Analyze and comprehend the applicability of management principles in solving complex
104	business challenges.
PO5	Develop entrepreneurial skills among the students, to venture out their own domain
103	proficiencies.
PO6	Build a perspective about global competitive environment including socio-cultural, technical
	and sustainability issues.
PO7	Develop leadership skills to achieve the individual, group and organizational goals.
PO8	Appreciate the importance of ethics in decision-making and inculcate the spirit of social
	responsibility.
PO9	Comprehend the applicability of management principles in the situations pertaining to global
	business world.
PO10	Illustrate various concepts, theories and models in the functional areas of business to face the
	challenges of changes.
PO11	Apply business analytics in different functional area for organizational effective results.
PO12	Interpret the legal environment and its dynamics to various business operations for effective
1012	end-results.

### PROGRAMME SPECIFIC OUTCOMES (PSO)

## After the culmination of the course students will be able to acquire:

PSO1	Utilize the tools such as Excel, SPSS, R, Weka and Tableau to solve business analytics
	problem.
PSO2	Analyze, design and develop solutions to a business problem
PSO3	Apply analytics techniques to analyze and interpret the data.

### 4.4. Curriculum Structure

	University Core (UC)								
Course code	Level	Course title	L	T	P	S	J	C	
CSEN1001	1	IT Productivity Tools	0	0	2	0	0	1*	
		Communication Skills in English -		×					
LANG1001	1	Beginners	0	0	4	0	0	2*	
LANG1011	1	Communication Skills in English	0	0	4	0	0	2	
		Advanced Communication Skills in							
LANG1021	1	English	0	0	4	0	0	2	
CLAD1001	1	Emotional Intelligence & Reasoning Skills (Soft skills 1)	0	0	2	0	0	1	
CLAD1011	1	Leadership Skills & Quantitative Aptitude (Soft skills 2)	0	0	2	0	0	1	
CLAD1021	1	Verbal Ability & Quantitative Ability (Soft skills 3)	0	0	2	0	0	1	
CLAD1031	1	Practicing Verbal Ability & Quantitative Aptitude (Soft skills 4)	0	0	2	0	0	1	
VEDC1001	1	Venture Development	0	0	0	2	0	2	
DOSP10XX	1	Sports 1#	0	0	0	2	0	2*	
DOSL10XX	1	Club Activity#	0	0	0	2	0	2*	
POLS1001	1	Indian Constitution and History	2	0	0	0	0	2*	
PHPY1001	1	Gandhi for the 21st Century	2	0	0	0	0	2*	
DOSL10XX	1	Community Service#	0	0	0	0	2	2*	
ENVS1001	1	Environmental Studies <sup>^</sup>	3	0	0	0	0	3*	
MFST1001	1	Health and Welbeing#	0	0	2	0	0	1*	
CLAD20XX	2	Soft skills 5A/5B/5C	0	0	2	0	0	1	
CLAD20XX	2	Soft skills 6A/6B/6C	0	0	2	0	0	1	
FINA3001	3	Personal Financial Planning#	0	0	2	0	0	1*	

\* Pass/Fail courses

# Opt any three courses among the five ^ Online/Swayam/NPTEL Courses

	Soft skills courses 5 and 6							
Course code	Level	Course title	L	T	P	S	J	C
CLAD2001	2	Preparation for Campus Placement - 1 (Soft skills 5A)	0	0	2	0	0	1
CLAD2011	2	Preparation For Higher Education (GRE/	0	0	2	0	0	1
CLAD2021	2	Preparation for CAT/ MAT - 1 (Soft skills 5C)	0	0	2	0	0	1
CLAD2031	2	Preparation For Campus Placement - 2 (Soft skills 6A)	0	0	2	0	0	1
CLAD2041	2	Preparation For Higher Education (GRE/ GMAT) - 2 (Soft skills 6B)	0	0	2	0	0	1
CLAD2051	2	Preparation for CAT/ MAT - 2 (Soft skills 6C)	0	0	2	0	0	1

	Sports courses								
Course code	Level	Course title	L	Τ	P	S	J	С	
DOSP1001	1	Badminton	0	0	0	2	0	2	
DOSP1011	1	Chess	0	0	0	2	0	2	
DOSP1021	1	Carrom	0	0	0	2	0	2	
DOSP1031	1	Football	0	0	0	2	0	2	
DOSP1041	1	Volleyball	0	0	0	2	0	2	
DOSP1051	1	Kabaddi	0	0	0	2	0	2	
DOSP1061	1	Kho Kho	0	0	0	2	0	2	
DOSP1071	1	Table Tennis	0	0	0	2	0	2	
DOSP1081	1	Handball	0	0	0	2	0	2	
DOSP1091	1	Basketball	0	0	0	2	0	2	
DOSP1101	1	Tennis	0	0	0	2	0	2	
DOSP1111	1	Throwball	0	0	0	2	0	2	

	Club activity courses								
Course code         Level         Course title         L         T         P         S         J						С			
DOSL1001	1	Club Activity (participant)	0	0	0	2	0	2	
DOSL1011	1	Club Activity (Member of Club)	0	0	0	2	0	2	
DOSL1021	1	Club Activity (Leader of Club)	0	0	0	2	0	2	
DOSL1031	1	Club Activity (Competitor)	0	0	0	2	0	2	

	Community service courses								
Course code	Level	Course title	L	Т	Р	S	J	С	
DOSL1041	1	<b>Community Services - Volunteer</b>	0	0	0	0	2	2	
DOSL10511Community Services - Mobilizer00002				2					

	Faculty Core (FC)							
Course code	Level	Course titleLTPS				S	J	C
IENT1001	1	Business Economics	3	0	0	0	0	3
ACCN1011	1	Financial Accounting and Analysis	4	0	0	0	0	4
IENT1011	1	Indian Business Environment	3	0	0	0	0	3
HRMG1001		Principles and Practice of		0	0	0	0	3
	1	Management						
LANG1XXX	1	Second Language	3	0	0	0	0	3
HRMG1021	1	Human Resource Management	3	0	0	0	0	3
MKTG1001	1	Marketing Management	3	0	0	0	0	3
IENT1021	2	Entrepreneurship	2	0	0	0	0	2
IENT1021	2	Essentials of Financial Management 3 0 0 0 0		0	3			

	Second Language Courses									
Course code	Level	Course title	L	Т	P	S	J	C		
LANG1081	1	Special English	3	0	0	0	0	3		
LANG1091	1	Hindi	3	0	0	0	0	3		
LANG1101	1	Sanskrit	3	0	0	0	0	3		
LANG1111	1	Telugu	3	0	0	0	0	3		

Programme Core/ Major Core (PC/MaC)								
Course code	Level	Course title	L	Т	Р	S	J	C
OPTS1011	1	Calculus - 1	4	0	0	0	0	4
BUAN1001	1	Programming in C++	2	0	2	0	0	3
OTPS1061	1	Calculus - 2	4	0	0	0	0	4
BUAN1011	1	Data Structures with C++	2	0	2	0	0	3
BUAN1021	1	Data Analysis with MS Excel	2	0	2	0	0	3
OPTS1111	2	Discrete Mathematics	3	0	0	0	0	3
OPTS1121	2	Statistical Methods	4	0	0	0	0	4
BUAN1051	2	Data Visualization with Tableau	3	0	0	0	0	3
BUAN1061	2	Data Analysis with R	4	0	0	0	0	4
		Predictive Analytics and Decision						
BUAN1071	2	Making	4	0	0	0	0	4
BUAN1081	2	Artificial Intelligence	3	0	0	0	0	3
OPTS1131	2	Business Research Methodology	3	0	0	0	0	3
BUAN1091		Data Analysis with Python	4	0	0	0	0	4
	3	Operations Research	4	0	0	0	0	4
BUAN1101	2	Machine Learning	3	0	0	0	0	3
BUAN1111	3	Database Management Systems	3	0	0	0	0	3
BUAN1121	3	Business Analysis	3	0	0	0	0	3
BUAN1131	3	Web Analytics	3	0	0	0	0	3
		Statistical Quality Control and Six						
	3	Sigma	3	0	0	0	0	3
BUAN1141	3	Big Data Analytics	3	0	0	0	0	3
	3	Internship	0	0	0	0	3	3
	3	Comprehensive Viva Voce	0	0	0	2	0	2

## **Open Elective (PE)#**

# Opt eligible PC/PE courses from other programs as an open elective course and earn 9 credits Total credit distribution

Description	Credits	% of Program (in credits)
University Core (UC)	12	10%
Faculty Core (FC)	27	22.5%
Program Core (PC)	72	60%
Open Electives (OE)	9	7.5%
Total	120	

#### L T P S J C 0 0 2 0 0 1\*

## **CSEN1001: IT Productivity Tools**

#### **Course Description:**

This course introduces all software tools that improve the productivity of a student in enhancing his learning experience with all the activities taken up as part of his coursework.

#### **Course Objectives**

- to enable the learner, the skill in preparing technical documents of professional quality using docs, sheets and forms.
- to involve the student in designing and creating of websites and acquaint the student with the skill of processing audio, images, documents etc.
- to create awareness in analysing data using pivot tables, query manager etc.
- to create awareness in composing emails, mail merge, e-mail merge etc.
- to provide the exposure to work with collaborative tools.

#### List of Experiments

- 1. Create a typical document consisting of text, tables, pictures, multiple columns, with different page orientations.
- 2. Create a technical paper / technical report consisting of table of contents, table of figures, table of tables, bibilography, index, etc.
- 3. Compose and send customized mail / e-mail using mail-merge.
- 4. Create / modify a power point presentation with text, multimedia using templates with animation.
- 5. Create spreadsheet with basic calculations with relative reference, absolute reference and mixed reference methods.
- 6. Simple report preparation using filtering tool / advanced filtering commands / pivot tables in spreadsheet application.
- 7. Analyse the results of a examination studentwise, teacherwise, coursewise, institute-wise.
- 8. Collecting and consolidating data using collaborative tools like google docs, sheets, forms.
- 9. Create charts/pictures using online tools like: www.draw.io or Smart Draw a website of his interest.

#### **Course Outcomes**

- Create/alter documents / Technical Paper / Project report with text, pictures, graphs of different styles.
- Create / modify power point presentations with text, multimedia and to add animation using/creating templates.
- Perform basic calculations / retrieve data / create pivot tables/charts using a spreadsheet application.
- Create simple diagrams/charts using online tools like: www.draw.io .
- Manage documents, presentations, spreadsheets and websites in collaborative mode.

#### **Text Books:**

- 1. Katherin Murray, 'Microsoft Office 365 Connect and collaborate virtually anywhere, anytime', Microsoft Press, ISBN: 978-0-7356-5694-9
- 2. EXCEL 2021 The Comprehensive Beginners to Advanced Users Guide to Master Microsoft Excel 2021. Learn the Essential Functions, New Features, Formulas, Tips and Tricks, and Many More
- 3. https://drawio-app.com/tutorials/video-tutorials/
- 4. Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics Fourth Edition ISBN-13: 978-1449319274

#### **References/Online Resources**

- 1. https://www.coursera.org/learn/introduction-to-computers-and-office-productivity-software
- 2. https://www.coursera.org/projects/analyze-data-pivot-tables-crosstabs-google-sheets
- 3. https://www.coursera.org/learn/excel-advanced#syllabus
- 4. https://www.coursera.org/learn/how-to-create-a-website
- 5. https://support.microsoft.com/en-us/office
- 6. https://www.diagrams.net/
- 7. <u>https://edu.google.com/</u>

## LANG1001: Communication Skills in English - Beginners

L	Т	Р	S	J	С
0	0	4	0	0	2*

#### **Course Description:**

Communication Skills in English (Beginner) is the first of the three-level courses for a developmental enhancement of learners' communication skills in English. This course focuses on giving learners exposure to factual level of comprehension (listening and reading) and application of the learning (Speaking/Writing) with an awareness for social and personality-based variations in communication. In addition to the LSRW skills, the focus of the course is on schematic thinking skills. This course is activity-based and practice-oriented in terms of procedural knowledge of vocabulary and grammatical structure. This syllabus is carefully developed to enable learners to engage in communication in English avoiding errors and be prepared for next level of learning English.

#### **Course Objectives**

- Train learners to listen actively, follow what is spoken in standard English, and answer questions to demonstrate their understanding of the main points of the speech, repeat part of what someone has said to confirm mutual understanding, though occasionally, there may be aneed to ask for repetition or clarification. (Bloom's Taxonomy Level/s: 2 & 3)
- Equip learners with the skills to read and comprehend straightforward texts and simple argumentative writing to identify the topic, the desired/relevant information, the main points of the argument, and the major conclusion/s. (Bloom's Taxonomy Level/s: 2 & 4)
- Help learners apply their knowledge and language skills to make mini oral presentations, and produce short coherent written texts using appropriate cohesive devices, suitable vocabulary and grammatical structures. (Bloom's Taxonomy Level/s:3)
- Enable learners to communicate with reasonable accuracy in familiar contexts with adequate fluency and generally good control by equipping them with a repertoire of frequently used vocabulary, structures, and speech patterns. (Bloom's Taxonomy Level/s: 2 & 3)

#### List of Activities & Tasks for Assessment

- 1. Listening to others and getting to know their experiences, interests and opinions
- 2. Introducing oneself: Salutation, basic information, relating to the context
- 3. Starting a conversation: Salutation, expressing purpose, expressing gratitude
- 4. Sharing one's experiences, interests and opinions
- 5. Reading short newspaper articles for gist
- 6. Picking new words from an article and working on them to know the meaning and usage
- 7. Using the new (unknown) words in own sentences
- 8. Sharing news with others initiate, sustain and conclude
- 9. Understanding the relevance of intonation to meaning from recorded conversations, and applying the learning in pair work (role play)
- 10. Writing a summary of a story/personal narrative after listening to it twice and making individual notes

- 11. Reading graphs, charts and maps for specific information, making note of the importantinformation and talking briefly about it within a small peer group
- 12. Writing a paragraph about oneself: a brief profile including major successes, failures, andgoals. Giving compliments/gratitude to others
- 13. Writing a paragraph (descriptive, complimentary) about others (Family, friends, role model, etc.)
- 14. Correcting each other's' drafts: errors in language word choice, structure, and conventions/etiquette
- 15. Writing a short structured descriptive/narrative essay in 3 paragraphs, reading others' essays and sharing feedback

#### **Course Outcomes**

- Listen actively, understand and extract the essential information from short talks/conversations/discussions that are delivered in clear, standard speech. (Bloom's Taxonomy Level/s: 2 & 3)
- Read, understand, and extract specific information from straightforward factual and simple argumentative texts on general topics and subjects of interest. (Bloom's Taxonomy Level/s: 2 & 3)
- Speak clearly with some confidence on matters related to his/her interests and academic work, and make short structured oral presentations on topics of personal interest. (Bloom's Taxonomy Level/s: 3)
- Write short straightforward connected texts on a range of familiar/general topics using appropriatelinking devices to achieve a clear sequence of ideas. (Bloom's Taxonomy Level/s: 3)
- Acquire sufficient language competency to express oneself in speech and writing with some confidence, using appropriate vocabulary and simple grammatical structures though lexical limitations and/or difficulty with formulation might be evident at times. (Bloom's Taxonomy Level/s: 2 & 4)

#### References

- 1. V. Sasikumar, P. Kiranmayi Dutt, Geetha Rajeevan. (2007). Listening and Speaking -Foundation Books Cunninhum, S. & Moor, P. (nd). New Cutting Hedge (Intermediate). Longman
- 2. Cambrdige Academic English: An Integrated Skills Course for EAP (Intermediate) By Craig Thaine, CUP (2012)
- 3. Rutherford, Andrea J. (2007). Basic Communication Skills for Technology: Second Edition. Delhi: Pearson Education.
- 4. McCarthy, M., O'Dell, F., Mark, G. (2005). English Vocabulary in Use. Spain: Cambridge University Press.
- 5. New Headway Academic Skills: Reading, Writing, and Study Skills Student's Book, Level-1 by Sarah Philpot. OUP
- 6. Philpot, S. & Curnick, L. (2017). Headway: Academic Skills: Reaing, Writing, and Study Skills. Introductory Level. OUP.
- 7. Thaine, C. (2012). Cambridge Academic English: An Integrated Skills for EAP. Intermediate. CUP.

#### **Online References**

- www.teachingenglish.org.uk
- learnenglishteens.britishcouncil.org
- https://eslflow.com/
- https://www.englishclub.com/
- https://www.oxfordlearnersdictionaries.com/
- https://dictionary.cambridge.org/
- learnenglishteens.britishcouncil.org
- https://freerice.com/categories/english-vocabulary

## LANG1011: Communication Skills in English

$\mathbf{L}$	Т	Р	S	J	С
0	0	4	0	0	2

#### **Course Description:**

Communication Skills in English (Intermediate) is the second of the three-level graded courses for a developmental enhancement of communication skills in English. Based on the learning outcomes set in the beginner level syllabus, this course focuses on giving learners more exposure to the use of language for communicative purposes and equip them with next level skills (ref. Bloom's taxonomy) and practice in terms of complexity and cognitive engagement. This course also includes inferential level of comprehension (listening and reading) that involves analysis and application of the language skills and decision-making skills while speaking/writing with an awareness for social and personality-based variations in communication. This course emphasizes guided writing through adequate tasks with pre and post context building. The focus is on stimulation and application of critical thinking in addition to schematic thinking for communication in real-life situations.

#### **Course Objectives**

- Train learners to actively listen to short audio texts with familiar content; guided activity like question-making and responding to others' questions based on the audio text would help learners engage in transactional dialogue; extended activities like extrapolating/critiquing the responses would help learners enhance their schematic thinking. (Bloom's Taxonomy Level/s: 2 & 4)
- Equip learners with strategies to read actively and critically and understand the writers' viewpoints and attitude by providing reading comprehension tasks using authentic texts such as op-ed articles from newspapers, and reports on contemporary problems. (Bloom's Taxonomy Level/s: 4 & 5)
- Help learners understand various aspects and techniques of effective presentations (group/individual) through demonstration and modelling, and enabling them to develop their presentation skills by providing training in using the tips and strategies given. Learners would be encouraged to observe and express opinions on teacher-modelling. Reflection on issues like anxiety, stage-fear, confidence, and levels of familiarity with topic and audience would be addressed. Practice would be given on tone, pitch, clarity and other speech aspects. Detailed peer feedback and instructor's feedback would cover all the significant aspects. (Bloom's Taxonomy Level/s: 2 & 4)
- Enable learners to become aware of the structure and conventions of academic writing through reading, demonstration, scaffolding activities, and discussion. Corrective individual feedback would be given to the learners on their writing. (Bloom's Taxonomy Level/s: 2 & 3)

#### List of Tasks and Activities

S. No.	Tasks	Activities
1	Listening to subject related short	Pre-reading group discussion, Silent
	discussions/explanations/ speech for	reading (Note-making), Modelling
	comprehension	(questioning), Post-reading reflection
2	Asking for information: asking questions	Group role-play in a context (i.e. Identifying
2	related to the content, context maintaining	the situation and different roles and enacting
	modalities	theirroles)
3	Information transfer: Verbal to visual (familiar	Pair work for discussion & feedback,
	context), demonstration by teacher, learners' task	Presentations, question-answer
	presentation and feedback	
4	Information transfer: Visual to verbal (unfamiliar	Pre-reading game/modelling, discussion in small
	context); demonstration by teacher, learners' task	groups, individual writing, and feedback
	(guided with scaffolding), learners' task (free),	
5	Introducing officials to peers and vice versa -	AV support noticing individual performance (3-
5	Formal context	4), pair work (in context), teacher modelling,
		group work for Introducing self and others in a
6	Introducing friends to family and visa yang	formal context
0	Informal context	structure & note-taking Introducing friends and
		family in an informal context
7	Vocabulary in context: Find clues in a text and use	Comprehending verbal communication:
	them to guess the meaning of words/phrases.	Identifying the contextual clues in oral and
	Apply the newly learnt vocabulary in	written texts; guessing the meaning of
	communication (speaking and writing).	listening to discussions/talks
8	A five-day journal (diary) writing based on	Note-making (group work), Discussion,
	learners reading from newspaper on a single	Feedback
	relevant/current social issue. Individual oral	
	instructor	
9	Follow the essentials of lectures, talks,	Making power point presentation aided with
	discussions, reports and other forms of academic	images, audio, video, etc. with a small group by
	presentations and mak2 individual and group	listening to academic lectures/talks/ discussions,
	tabular data, etc.	etc.
10	Self-reflection: Re-reading one's own drafts.	Pre-task discussion/modelling, Editing the texts
	identifying errors, correcting the errors, and giving	by careful reading and identifying the errors,
	rationalize the changes	peer-exchange (Pair work),
11	Collaborative work (speaking and writing) in	Teedback/consolidation Pre-task modelling (neer/teacher) general
11	small groups of 3 or 4 learners: discussing a	discussion on structure, group work
	general/discipline-specific topic: creating outline,	(collaboration), feedback
	assigning specific roles to members of the group;	
	and group presentation followed by peer and instructor feedback	
12	Independent reading of different text types using	Brain-storming, mapping of key terms (content
	appropriate reference sources by adapting suitable	specific), reading and note-making (individual),
	reading styles and speed. Focus on active reading	oral questioning, discussion
	idiomatic expressions.	

13	Role-play (specific social and academic situations): planning (making notes), understanding nuances of speaking in context, coordinating with situational clues and fellow speakers/participants	Peer discussion for outline, A-V support, observing (teacher modelling), role play (guided), role-play (free), feedback
14	Writing instructions: Guidelines - Flowcharts - Procedures to be followed	Pre-task reading, pair work, teacher/peer- discussion, feedback
15	Speaking spontaneously on topics of interest and writing short structured essays on the same topics adopting appropriate academic conventions and grammatical accuracy.	Reading for task preparation, note-making, speaking, reflection and corrective peer and teacher feedback

#### **Course Outcomes**

- Understand the speaker's point of view in fairly extended talks on general or discipline-specific topics, and follow simple lines of argument in discussions on familiar contemporary issues. (Bloom's Taxonomy Level/s: 3)
- "Read and demonstrate understanding of articles and reports on limited range of contemporary issues in which the writers adopt particular stances. Also provide samples of written communication containing fairly complex information and reasons for choices/opinions/stances. (Bloom's Taxonomy Level/s: 2 & 3)"
- Make short presentations on a limited range of general topics using slides, and engage in small group discussions sharing experiences/views on familiar contemporary issues and give reasons for choices/opinions/plans. (Bloom's Taxonomy Level/s: 3 & 4)
- Write clear, fairly detailed text (a short essay) on a limited range of general topics, and subjects of interest, and communicate clearly through email/letter to seek/pass on information or give reasons for choices/opinions/plans/actions. (Bloom's Taxonomy Level/s: 3)
- Reflect on others' performance, give peer feedback on fellow learners' presentations, responses to writing tasks and reading comprehension questions. (Bloom's Taxonomy Level/s: 5)

#### **Reference Books**

- 1. P. Kiranmayi Dutt, Geetha Rajeevan. (2007). Basic Communication Skills. Foundation Books. CUP
- 2. Harmer, J. (1998). How to teach English. Longman
- 3. Sanjay Kumar & Pushp Lata. (2018). Communication Skills: A Workbook. OUP.
- 4. Cambridge IGCSE: English as a Second Language Teacher's Book Fourth Edition. By Peter Lucantoni. CUP (2014).
- 5. Cambrdige Academic English: An Integrated Skills Course for EAP (Upper Intermediate) By Martin Hewings, CUP (2012)
- 6. Richards, J.C. and Bohlke, D. (2012). Four Corners-3. Cambridge: CUP.

- 7. Headway Academic Skills: Reading, Writing, and Study Skills Student's Book, Level-2 by Sarah Philpot. OUP
- 8. Latham-Koenig, C. & Oxenden, C. (2014). American English File. Oxfor: OUP.
- 9. McCarthy, M. & O' Dell. F. (2016). Academic Vocabulary in Use. Cambridge: CUP

#### **Online Resources**

- 1. <u>https://www.grammarly.com/blog/</u>
- 2. <u>https://www.nationalgeographic.org/education/</u>
- 3. <u>https://www.bbc.co.uk/teach/skillswise/english/zjg4scw</u>
- 4. https://www.englishclub.com/
- 5. https://www.oxfordlearnersdictionaries.com/
- 6. https://dictionary.cambridge.org/
- 7. learnenglishteens.britishcouncil.org
- 8. https://freerice.com/categories/english-vocabulary
- 9. http://www.5minuteenglish.com/
- 10. https://breakingnewsenglish.com/
- 11. https://www.digitalbook.io/
- 12. <u>https://librivox.org/</u>

## LANG1021: Advanced Communication Skills in English

L T P S J C 0 0 4 0 0 2

#### **Course Description:**

Communication Skills in English (Advanced) is the third of the three-level graded courses for a developmental enhancement of communication skills in English. Based on the learning outcomes set in the upper-intermediate syllabus, this course focuses on giving learners exposure to higher level of skills/input processing (ref. Bloom's taxonomy) and practice in terms of complexity and cognitive engagement. This course includes advanced level of comprehension i.e. anaytical, evaluative and extra-polative processing (listening and reading) and involves problem-solving, logical reasoning and decision-making skills in terms of application of the learning (speaking/writing) with an awareness for social and personality based variations in communication. This course provides opportunities with activity-based practice of advanced oral and written communicative skills besides building awareness on the finer nuances of language use for various purposes. This course emhasizes free writing through meaningfully engaging tasks with a pre and post context building. There is ample scope for application of critical thinking through simulated activities for effective communication in real life situations.

#### **Course Objectives**

- 1. Enable learners to listen actively become aware of tone and attitude in speech, and demonstrate their comprehension of fairly complex lines of argument presented by a variety of speakers in talks/presentations/discussions. (Bloom's Taxonomy Level/s: 2 & 4)
- 2. Enable learners to become aware of tone and attitude in written texts, and demonstrate their comprehension of fairly complex lines of argument and points of view presented in a variety of texts by equipping them with upper intermediate to advanced level reading skills and strategies. (Bloom's Taxonomy Level/s:2 & 3)
- 3. Make effective presentations, engage in formal group discussions, and write structured essays/ short reports to highlight the significance of actions/decisions/experiences, and sustain views by providing relevant evidence and argument. (Bloom's Taxonomy Level/s: 3 & 4)
- 4. Equip learners with the skills and strategies to communicate effectively in speech and writing using the language with a degree of fluency, accuracy and spontaneity, and fairly good grammatical control adopting a level of formality appropriate to the context. Encourage learners to apply their knowledge of language and their communication skills in real life situations. (Bloom's Taxonomy Level/s:3 & 5)

#### List of Activities & Tasks for Assessment

S.No.	Tasks	Activities	СО
1	Evaluative and extrapolative reading of a long text/short texts on a current topic related to technology and society, identifying and questioning the author's intention, post- reading discussion in small groups, maintaining group dynamics, arriving at a consensus	Pre-reading group discussion, silent reading (Note-making), modelling (questioning), post-reading reflection and brief presentation of thoughts/ideas/opinions on the theme of the text	3
2	Debate in pairs based on listening to two recorded contemporary speeches by well- known leaders in different fields. Peer feedback and instructor feedback.	Pre-recorded audio/video for listening, student checklist for noticing key words/concepts, pre-task orientation (by teacher), pair work, feedback	1
3	Information transfer: Verbal to visual (unfamiliar context); demonstration by teacher, learners' task (guided with scaffolding), learners' task (free), presentation, question-answer (among students), modification and feedback before the final version is done	Pair work for discussion and feedback, presentations, question-answer	2
4	Information transfer: Visual to verbal (unfamiliar context); demonstration by teacher, learners' task (guided with scaffolding), learners' task (free), presentation, question-answer (among students), modification, editing, proofreading, and feedback before the final version is done	Pre-reading game/modelling, discussion in small groups, independent writing and feedback	4
5	Expressing opinion on a short argumentative text (e.g. a journal article or a newspaper editorial) and justifying one's opinion/stance; focus on the use of appropriate conventions of formal and polite speech, and managing bias	Listening to group discussions/debates, reading news-paper articles on the current issues and expressing opinions in favour or against the topic (in GDs, debates or writing argumentative essays).	3
6	Role-play (complex social and academic/professional situations): Focus on significant aspects of delivery including clarity, tone, and use of contextually appropriate vocabulary and conventions, observation, reflective discussion, and self- reflective writing	Reading newspaper/magazine articles/blog posts on current social issues, listening to talks/discussions/debates etc. and participating in role-plays using expressions appropriate to the context.	1
7	Collaborative writing in groups of 3 -4 on topics that would require data collection and reading followed by recorded peer-reflection and peer-feedback, group presentation and feedback	Pre-task modelling (peer), general discussion on structure, group work (collaboration), presentation, peer feedback, Open-class discussion	5

8	Formal Group Discussion on topics of current interest and relevance; focus on effective participation, reflection on control over argument/counter argument, and adherence to the conventions of formal GD	Noticing strategies from AV modeling, teacher scaffolding though open-house discussion, Note-making (Group work), Group Discussion (free), post perfromance discussion, Feedback	2
9	Mind-mapping for advanced reading, making correlations across texts, extending author's point of view	Reading texts on abstract topics and comprehending the author's perspective by inferring the unknown words' meaning in the context and making notes using mind-map strategy and presenting it orally.	3
10	Handling question and answer sessions after presentations: justifying arguments, taking counter-arguments, agreeing and disgreeing with rationale	Listening to some lectures, talks, and presentations in the academic seminars and adapting some strategies to handle the Q&A sessions using polite and formal expressions to agree or disagree with the statements.	1
11	Modelling an interview: with a panel of four judges (peers)	Pre-task activity for orientation/strategies (controlled/guided), Model interview (AV support), Group work (role play), interview in pair (one-to-one), Interview in group (many -to-one), oral corrective feedback (peer/teacher)	2
12	Writing a short reflective report of an event - incident/meeting/celebration	Writing a report on meetings/celebrataions/events etc. by actively involving in such events and giving a short oral presentation on the same.	4
13	Speaking on abstract and complex topics beyond his/her own area of interest/field of study, using the language flexibly and effectively.	Reading texts on abstract topics and comprehending the author's perspectives. Similarly, listening to talks and discussions on an abstract topic of other discipline and making short oral presentation by sharing views and opinions.	3
14	Self-reflection on own speech in context(recorded): tone, pitch, relevance, content; extending the reflections/ideas to others	Listening to selected general discussions (audios and videos) and observing the language production. Recording own speech on some general topic and providing a critical review (self-reflection) on it by focusing on the tone, expressions and relevance of the content, etc.	1
15	Collaborative and individual task: planning, preparing (preparing an outline, structure, setting objectives and presenting the plan of action) and executing a mini-project, and submitting a brief report on the same peer and instructor feedback after the planning stage and on completion of the mini project	Pre-task modelling (peer/teacher), general discussion on structure, group work (collaboration), oral corrective, task distribution, presentation, feedback	5

#### **Course Outcomes**

- Listen to extended lectures, presentations, and discussions on a wide range of contemporary issues and demonstrate understanding of relatively complex lines of argument. (Bloom's Taxonomy Level/s: 2)
- Make presentations using suitable AV aids and engage in formal group discussions on a wide range of topics of contemporary interest, demonstrating awareness of standard/widely accepted conventions. (Bloom's Taxonomy Level/s: 3)
- Read and demonstrate understanding of the writer's stance/viewpoint in articles and reports on a wide range of contemporary issues and discipline-specific subjects. (Bloom's Taxonomy Level/s: 2 & 4)
- Write analytical essays on a wide range of general topics/subjects of interest, and engage in written communication (emails/concise reports) to exchange relatively complex information, giving reasons in support of or against a particular stance/point of view. (Bloom's Taxonomy Level/s: 3 & 4)
- Complete a mini project that necessitates the use of fairly advanced communication skills to accomplish a variety of tasks and submit a report in the given format. (Bloom's Taxonomy Level/s: 4 & 5)

#### **Reference Books**

- 1. Latham-Koenig, C. & Oxenden, C. (2014). American English File-5. Oxford: OUPRichards,
- 2. J.C. and Bohlke, D. (2012). Four Corners-4. Cambridge: CUP.
- 3. Cambrdige Academic English: An Integrated Skills Course for EAP (Advanced) By Martin Hewings and Craig Thaine, CUP (2012)
- 4. Berlin, A. (2016). 50 Conversation Classes: 50 Sets of Conversation Cards With an Accompanying Activity Sheet Containing Vocabulary, Idioms and Grammar. Poland: CreateSpace Independent Publishing Platform
- 5. Zemach, D. E., Islam, C. (2011). Writing Paragraphs: From Sentence toParagraph. Germany: Macmillan Education.
- 6. Stewart, J. P., Fulop, D. (2019). Mastering the Art of Oral Presentations: Winning Orals, Speeches, and Stand-Up Presentations. United Kingdom: Wiley.
- 7. Kroehnert, Gary. (2010). Basic Presentation Skills. Sidney: McGraw Hill.
- 8. Cunninghum, S. & Moor, P. (nd). Cutting Edge (Advanced) With Phrase Builder. Longman Publishers. CUP
- 9. McCarthy, M & O'Dell, F. (2017). English Idioms in Use (Advanced). Cambridge: CUP.

#### **Online Resources**

- 1. https://www.grammarly.com/blog/
- 2. https://www.nationalgeographic.org/education/
- 3. https://www.bbc.co.uk/teach/skillswise/english/zjg4scw
- 4. https://www.englishclub.com/

- 5. https://www.oxfordlearnersdictionaries.com/
- 6. https://dictionary.cambridge.org/
- 7. learnenglishteens.britishcouncil.org
- 8. https://freerice.com/categories/english-vocabulary
- 9. http://www.5minuteenglish.com/
- 10. https://breakingnewsenglish.com/
- 11. https://www.digitalbook.io/
- 12. https://librivox.org/

## **CLAD1001: Emotional Intelligence & Reasoning Skills (Soft Skills 1)**

Т L Ρ S J C 0 2 0 0 1 0

#### **Course Description:**

Emotional intelligence is a set of skills that are thought to contribute to the appraisal of emotions in oneself and others. It can also help contribute to the effective regulation of emotions as well as feelings (Salovey & Mayer, 1990). In terms of emotional intelligence, self-awareness and selfmanagement have to do with our ability to relate to ourselves. Social awareness and relationship management have to do with our ability to relate to others. Similarly, the ability to solve questions on Analytical Reasoning and Data Sufficiency is a critical area tested in almost all competitive examinations and admission tests. Upon completion, students should be able (1) to deal with their own emotions as well as the emotions of others and relate better with both. Using better knowledge of EI, students will also be able to set more meaningful goals for themselves, choose suitable time management techniques that work best for them and work in teams more effectively. (2) to apply different concepts, ideas and methods to solve questions in reasoning and data sufficiency

#### **Course Objectives:**

- 1. Use EI to relate more effectively to themselves, their colleagues and to others. Apply selfawareness and self-assessment (SWOT) to better understand and manage their own emotions. Apply social awareness to empathize with others and build stronger relationships with others.
- 2. Set meaningful goals based on their strengths and weaknesses and apply time management techniques, such as Q4 organizing to put first things first.
- 3. Manage conflicts and work in teams in an emotionally intelligent manner.
- 4. Solve questions on non-verbal and analytical reasoning, data sufficiency and puzzles

Unit	Topics	Hours
1	Self Awareness & Self Regulation: Introduction to Emotional Intelligence, Self Awareness: Self Motivation, Accurate Self Assessment (SWOT Analysis), Self Regulation: Self Control, Trustworthiness & Adaptability	3
2	Importance, Practising Social Awareness, Building Relationships, Healthy and Unhealthy Relationships, Relationship Management Competencies- Influence, Empathy, Communication, Types of Conflicts, Causes, Conflict Management	3
3	Social Media: Creating a blog, use of messaging applications, creating a website to showcase individual talent, creation of a LinkedIn Profile	2

		20
9	Spatial Reasoning: Shapes, Paper Cutting/Folding, Mirror images, Water images and Rotation of figures	2
8	Logical Deduction: Venn diagrams, Syllogisms, Data Sufficiency, Binary logic	4
7	Analytical Reasoning: Cubes and Dices, Counting of Geometrical figures	3
6	Verbal Reasoning: Introduction, Coding-decoding, Blood relations, Ranking, Directions, Group Reasoning	6
5	Teamwork: Team Spirit, Difference Between Effective and Ineffective Teams, Characteristics of High Performance Teams, Team Bonding, Persuasion, Team Culture, Building Trust, Emotional Bank Account	4
4	Goal Setting & Time Management: Setting SMART Goals, Time Wasters, Prioritization, Urgent Vs Important, Q2 Organization	3

#### **Total Hours**

#### 30

#### **Course Outcomes**

- Students will be able to relate more effectively to themselves, their colleagues and to others
- Students will be able to set their short term and long term goals and better manage their time
- Students will be able to manage conflicts in an emotionally intelligent manner and work inteams effectively
- Students will be able to solve questions based on non-verbal and analytical reasoning, data sufficiency and puzzle

#### **References:**

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

## CLAD1011: Leadership Skills & Quantitative Aptitude (Soft Skills 2)

#### **Course Description:**

L T P S J C 0 0 2 0 0 1

Communication Skills is having the ability to convey information to others so that messages are understood and outcomes delivered. Some essential qualities of Communication Skills include understanding the needs of others, clearly communicating messages, adapting the communication style, and using a range of communication methods. Presentation Skills is having the ability to confidently deliver an engaging message to a group of people which achieves the objectives. Some essential qualities of Presentation Skills include a thorough preparation of content, structuring content logically, managing nerves, engaging your audience, delivering presentation objectives, positively influencing the audience, and responding to audience needs. Tackling questions based on numbers, arithmetic, data interpretation and puzzles requires the application of different rules and concepts of numerical computation, numerical estimation, and data estimation.

#### **Course Objectives:**

- 1. Learn and apply, through different individual and group activities, different ideas and skills to communicate in a positive and impressive manner.
- 2. Apply the goal setting process (based on SWOT) and Q2 organizing for effective time management.
- 3. Apply different concepts in numbers, numerical computation and numerical estimation to solve questions that often appear in various competitive examinations and admission tests.
- 4. Apply different concepts for tackling questions based on data interpretation, progression and series that are frequently given in various competitive examinations and admission tests.

#### Unit

#### Topics

1 Communication Skills: *The Communication Process*, Elements of Interpersonal Communication, *Non-Verbal Communication*: Body Language, Posture, Eye Contact, Smile, Tone of Voice, *Barriers to Communication*. Effective Listening Skills: Active Listening, Passive Listening, Asking Questions, Empathizing, BeingNon Judgemental, Being Open Minded, Mass Communication: Design of Posters,

Advertisements, notices, writing formal and informal invitations

- Focus on Audience Needs, Focus on the Core Message, Use Body Language and
   Voice, Start Strongly, Organizing Ideas & Using Visual Aids: SPAM Model,
   Effective
   Opening and Closing Techniques, Guy Kawasaki's Rule (10-20-30 Rule),
   Overcoming Stage Fear, Story Telling
- Problem Solving & Decision Making: Difference Between the Two, Steps in
   RationalApproach to Problem Solving: Defining the Problem, Identifying the
   Root Causes, Generating Alternative Solutions, Evaluating and Selecting
   Solutions, Implementing

#### Hours

5

and Following-Up, Case Studies

4	Group Discussion: Understanding GD, Evaluation Criteria, Nine Essential Qualities for Success, Positive and Negative Roles, Mind Mapping, Structuring a Response, Methods of Generating Fresh Ideas	4
5	Number Theory: Number System, Divisibility rules, Remainders and LCM & HCF	3
6	Numerical Computation and Estimation - I : Chain Rule, Ratio Proportions, Partnerships & Averages, Percentages, Profit-Loss & Discounts, Mixtures, Problems on Numbers & ages	6
7	Data Interpretation: Interpretation and analysis of data in Tables, Caselets, Line- graphs, Pie-graphs, Box-plots, Scatter-plots and Data Sufficiency	3
8	Mental Ability: Series(Number, Letter and Alphanumeric), Analogy(Number, Letterand Alphanumeric) and Classifications	3
	Total Hours	30

#### **Course Outcomes**

- Students will be able to communicate 'one-on-one' and 'one-on-many' confidently using both verbal and non-verbal messages and deliver impressive talks/ presentations to a group both with and without the use of PPTs and create posters, advertisements, etc.
- Students will be able to apply the rational model of problem solving and decision making in their problem solving and decision making efforts.
- Students will be able to solve questions based on numbers and arithmetic given in various competitive examinations
- Students will be able to solve questions based on data interpretation, progressions and series.

#### **References:**

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

## CLAD1021: Verbal Ability & Quantitative Ability (Soft Skills 3)

L T P S J C 0 0 2 0 0 1

#### **Course Description:**

Vocabulary is an important part of verbal ability. An understanding of word formation, prefixes, suffixes and roots is necessary to remember and use a vast repository of words. Approaching words through word families and other ways of groupings is an effective way of gaining mastery over vocabulary. Understanding and getting acquainted with the different rules and exceptions in the use of grammar and structure, especially from the relevant examination point of view, is crucial to cracking questions given in many competitive tests. Similarly, improving reading comprehension skills and test taking abilities in this area takes time and effort, especially given the fact that most students do not possess strong reading habits. In so far as quantitative aptitude is concerned, students need to develop a strong foundation on the basic mathematical concepts of numerical estimation, geometry, mensuration, data sufficiency, etc. to be able to crack different round 1 tests of major recruiters and admission tests of top Indian and foreign universities.

#### **Course Objectives:**

- 1. List and discuss the different word formation methods, word denotation, connotation, collocation, etc. and introduce selected high frequency words, their antonyms, synonyms, etc.
- 2. Apply different advanced reading skills to solve questions based on author's tone, main ideas and sub-ideas, inferences, parajumbles, etc. that are frequently asked in various competitive exams and admission tests.
- 3. Solve different types of questions based on vocabulary, such as word analogy; structure, grammar and verbal reasoning; introduce common errors and their detection and correction.
- 4. Solve questions on numerical estimation, mensuration, data sufficiency based on quantitative aptitude. This includes questions on time and work, time and distance, pipes and cisterns, lines and angles, triangles, quadrilaterals, polygons and circles, 2 & 3 dimensional mensuration.

#### Syllabus

- 1. **Vocabulary Builder:** Understanding Word Formation, Prefixes, Suffixes and Roots, Etymology, Word Denotation, Connotation and Collocation, Synonyms and Antonyms
- 2. **Reading Comprehension:** Advanced Reading Comprehension: Types of RC passages, Types of Text Structures, Types of RC Questions: Distinguishing Between Major Ideas and Sub Ideas, Identifying the Tone and Purpose of the Author, Reading Between the Lines and Beyond the Lines, Techniques for Answering Different Types of Questions
- 3. **Para Jumbles:** Coherence and Cohesion, Idea Organization Styles, Concept of Mandatory Pairs and Its Application: Transitional Words, Antecedent-Pronoun Reference, Article

Reference, Cause and Effect, Chronological Order, General to Specify, Specify to General, Idea-Example, Idea-Explanation, Etc.

- 4. **Grammar Usage:** Rules Governing the Usage of Nouns, Pronouns, Adjectives, Adverbs, Conjunctions, Prepositions and Articles
- Numerical Computation and Estimation II: Time and Work, Pipes and Cisterns, Time and Distance, Problems on Trains, Boats and Streams, Races and Games of Skill, Simple Interest & Compound Interest
- 6. Geometry: Lines and Angles, Triangles, Quadrilaterals & Polygons, and Circles
- 7. **Mensuration:** 2-Dimensional Mensuration (Triangles, Quadrilaterals and Circles), 3-Dimensional Mensuration (Cubes, Cuboids, Cylinder, Cone, Sphere)

#### **Course Outcomes:**

- 1. List and discuss word formation methods, selected high frequency words, their antonyms, synonyms, etc.
- 2. Analyze reading passages and quickly find out the correct responses to questions asked, including para jumbles, by using reading skills like skimming, scanning, reading between the lines, etc.
- 3. Solve different types of questions based on vocabulary, structure, grammar and verbal reasoning
- 4. Solve questions on numerical estimation, mensuration, data sufficiency based on quantitative aptitude

#### **References:**

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

## CLAD1031: Practicing Verbal Ability & Quantitative Aptitude (Soft Skills 4)

L T P S J C 0 0 2 0 0 1

#### **Course Description:**

A sound knowledge of the rules of English grammar, structure and style and its application in detecting errors in writing are important areas of Verbal Ability frequently tested as a part of the written test in many competitive examinations and admission tests of major recruiters and universities respectively. This module focuses on all important areas of grammar and structure commonly asked in major tests, such as GMAT, CAT, XLRI, CRT, etc. Similarly, in the area of Quantitative Aptitude, different kinds of questions are asked from Combinatorics (Permutations & Combinations, Probability], Cryptarithmetic & Modular Arithmetic (Cryptarithmetic, Application of base system (7, 24), Clocks (Base 24), Calendars (Base 7), and Mental Ability (Number series, Letter series & Alpha numeric series, Analogies (Numbers, letters), Classifications, Algebra (Exponents, Logarithms, Problems related to Equations, Special Equations, and Statistics). This module focuses on all these areas by building on what the students already learnt in their earlier studies.

#### **Course Objectives:**

- 1. Apply the rules of grammar to solve questions in Error Detection, Sentence Correction and Sentence Improvement.
- 2. Apply the rules of structure to solve questions in Error Detection, Sentence Correction and Sentence Improvement, Fill-in-blanks and Cloze Passages
- 3. Explain methods of solving problems in Combinatorics (Permutations & Combinations, Probability], Cryptarithmetic & Modular Arithmetic (Cryptarithmetic, Application of base system (7, 24), Clocks (Base 24), Calendars (Base 7)
- 4. Explain how to solve questions in Mental Ability (Number series, Letter series & Alpha numeric series, Analogies, Numbers, letters, Classifications] and Algebra (Exponents, Logarithms, Problems related to Equations, Special Equations, Statistics)

#### **Syllabus**

- 1. Error Detection: Pronouns, Conjunctions, Prepositions and Articles
- 2. Error Detection: Tenses and their Uses
- 3. Sentence Correction: Subject-Verb Agreement, Antecedent-Pronoun Agreement, Conditional Clauses
- Sentence Correction: Modifiers (Misplaced and Dangling) & Determiners, Parallelism & Word Order, and Degrees of Comparison
- 5. Combinatorics: Permutations & Combinations, Probability

- Crypt arithmetic & Modular Arithmetic: Crypt arithmetic, Application of Base System (7, 24), Clocks (Base 24), Calendars (Base 7)
- Algebra: Exponents, Logarithms, Word-problems related to equations, Special Equations, Progressions, Statistics

#### **Course Outcomes:**

- 1. Identify and correct errors in English grammar and sentence construction
- 2. Identify and correct errors in Structure, Style and Composition
- 3. Solve problems in Combinatorics, Cryptarithmetic, and Modular Arithmetic
- 4. Solve problems in Mental Ability and Algebra

#### **References:**

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

## **VEDC1001: Venture Development**

L	Т	Р	S	J	С
0	0	0	2	0	2

#### **Course Description**

In this course, you will discover your deeper self in terms of how you might contribute to society by creating exciting new products and services that can become the basis of a real business. Your efforts, creativity, passion, and dedication to solving challenging problems are the future of our society, both in your country and worldwide.

The course is divided into four sections:

- 1. Personal discovery of your core values and natural skills
- 2. Ideation and improving the impact
- 3. Business model design for the innovation
- 4. Presenting your idea in a professional manner suitable for a new venture pitch

Each section has key frameworks and templates for you to complete, improving your idea step by step until the final presentation.

First, you will discover your personal values and emerging areas of knowledge that are the foundations of any successful company. Next, you will learn how to develop insight into the problems and desires of different types of target customers and identify the design drivers for a specific innovation. Then, you will learn specific design methods for new products and services. And as important as the product or service itself, it is a strategy for monetizing the innovation – generating revenue, structuring the operating costs, and creating the operating profit needed to support the business, hire new employees, and expand forward.

This project is intended to be for teams of students. Innovation and entrepreneurship are inherently team-based. This course will give you that entrepreneurial experience.

This is the beginning of what might be the most important journey of personal and career discovery so far in your life, one with lasting impact. This is not just a course but potentially an important milestone in your life that you remember warmly in the years to come.

#### **Course Objectives**

Students will have the opportunity to:

- Discovery who you are Values, Skills, and Contribution to Society
- Understand how creativity works and permeates the innovation process
- Learn the basic processes and frameworks for successful innovation.
- Gain experience in actually going through the innovation process.
- Conduct field research to test or validate innovation concepts with target customers.

• Understand innovation outcomes: issues around business models, financing for start-ups, intellectual property, technology licensing, corporate ventures, and product line or service extensions.

#### Syllabus

*Expectations of you in the classroom:* Each student is <u>expected</u> to be prepared to discuss the readings/exercises assigned for each class. It's not optional! Students will be randomly asked to discuss and summarize the material. Your learning – and your success—in this course are heavily dependent upon your willingness to participate actively in class discussion. Your class participation will be assessed on the quality and consistency of your effort in each and every class.

*Late assignments:* Late assignments are subject to grade penalty. Lateness will only be considered for grading if prior notice was given to the instructor before the due date.

**Presentation:** Achieving success with an innovative idea requires you to package and present the idea in a crisp, creative, and powerful manner. The activity of presenting helps you to internalize your idea -- as you talk about it and obtain feedback – and improve upon it. There would be two major presentations during the course, plus a series of other smaller unscheduled presentations of work in progress or course material. Prepare, practice, and succeed!

*Time spent outside of class:* The course is hands-on and requires students to conduct field research through direct interactions with people (interviews/surveys) and online/in the library. Specifically, the course requires that students conduct studies with potential target users and stakeholders. You must be prepared to go out of your comfort zone to dig for information. You will need to search for information online and arrange to meet or talk to relevant people who may have the information you need.

#### **Group Project Overview**

This is a semester length project and the cornerstone component of the course. The group project will give you the opportunity to apply the course concepts to a real situation. You will learn about the entrepreneurship for your own business or your work in organizations. Even if you are not going to be an entrepreneur, you need to know how to identify the opportunities, who to persuade people, and how to create economic and social values in many different contexts.

<u>Talking to customers</u> is one of the most important steps in investigating your business because your entrepreneurial vision must correspond to a true market opportunity. With your group, select 5-6 potential customers willing to be interviewed. They should represent a cross-section of our target market and should provide information that helps you refine your opportunity. This is not a simple survey: you are seeking in-depth understanding of the lifestyle and behaviors of your customer that can help you shape your opportunity. Please remember, you are not simply looking to confirm you have a great idea, but to shape your idea into a great opportunity. You will maximize your chances for success and your ability to execute your business cost-effectively by making early (rather than later) changes to your concept.

<u>"Design"</u> is fun, particularly when you merge customer insight with your own creativity. Enjoy! In this book, we provide structured methods to be an active listener and learner from customers as

well as a product or service designer.

<u>Business modeling</u> is not as hard as it might sound. This is the design of your business – how it charges customers, what is spent producing and selling products or services, and the money that can be made for each unit sold. We keep it simple – so should you.

For <u>the final outcome</u>, you will be required to come up with Pitch that can used as the basis for actually starting a company based on an impactful innovation. Once again, we provide a specific format and tools for creating a compelling Pitch. We also want you to think about an exciting proposition that is more than just making money, but rather, one that helps society. This will give you innovation and venture concept greater lift with customers – and it will also make you feel better, deep inside.

#### Personal Discovery Reflection(10%) 100% Individual 90 ParticipationandDiscussion (10%) 80 **Group Project** 70 Ideation and Impact (5%) Customer insight (15%) 60 Solution Design (15%) Team **Business Model Discovery (15%) Discovery Integration: Pitch (20%)** 50 20lution STEP 06 STEP 07 STEP 08 STEP 09 STEP 10 STEP 11 Discovery Ideation & **Product Line** Prototyping 10 User Insight **Concept Design Reality Check** Strategy Solutions Impact Business STEP 05 Model Design Mission 1 Statement STEP 04 STEP 12 Understand the Define Purpose Industry STEP 03 STEP 13 Personal Discovery Types of **Build a Team** through Entrepreneurship! Business Models STEP 02 STEP 14 Define Revenue Excite & Excel Models STEP 01 STEP 15 Define Operating Personal Values Models STEP 16 STEP 20 STEP 19 STEP 18 STEP 17 Discovery Personal Integation Validate Define Customer Define Company Tell Your Story **Create Value Business Model** Impact Journey

#### **Project Components and Grading**

#### **Deliverables**

There are a number or different deliverables for the course that follow the templates presented in the book, as applied to your own venture idea. Do your best to keep up with the timeline of the class; do not fall behind! Later templates build on the learnings from prior templates. Make the most of your team! Everyone needs to pitch in. In no case, should one person be taking the lead on all templates. Rather, different team members should take the lead on specific deliverables. Coordinate well. Let your teacher know if a team member is not carrying his or her load.

#### **Specific Deliverables**

#### Ideation and ImpactHand-in Package: 5% of total grade

clearly written, with a one-page explanation for the team's decision

- Problem to Solve Templates, Step 4, Page 62 and 63 (with a page of additional explanation if needed)
- Idea Impact Template, Step 6, Page 69 (with a page of explanation)

#### Customer Interviews and InsightHand-in Package: 15%

(1<sup>st</sup> Round of Customer Interviews)

- Customer Interviews Template, Step 7, Pages 75-78, plus add additional template forms for each additional customer interview. The more, the better.
- Idea Reshaping Template, Step 7, Pages 84 and 85. Integration into overall conclusions. How have you improved your original idea through customer research?
- Latent Needs Template, Step 7, Page 93 what are the frustrations of users that are not solved by current products or services?
- Full Use Case Template, Step 7, Page 99 how do you customers' needs change over the full use case, and what innovative ideas can you propose at each step of the way?

#### Concept Design (and Test) Hand-in Package: 15%

- Customer Value Proposition Template: Step 8, Page 107. This becomes the landing point for what you learned in your customer interviews.
- Competitive Analysis Template: Step 8, Page 109. (Use the Web or actual stores/dealers)
- Product Vision and Subsystem Design Templates:Step 10, Pages 121 and 126 (You can add additional pages with design illustration and explanations of your bubble chart)
- Reality Check Survey Template and Results: Step 11, Page 141, 143-144 (You can use more than 2 pages for reporting the results.)

Business Model Design Hand-in Package: 15%

- Industry Analysis Templates: Step 12, Pages 153 and 154
- Illustrate the Business Model Template: Step 13, Page 170

(Use different colours or line patterns to show the flows of product, money, and information)

- Revenue Model Template: Step 14, Page 177
- Operating Model Template: Step 15, Page 187
- Customer Journey Template: Step 16, Page 195
- Validating the Business Model Template: Step 17, Pages 199 and 200

#### Discovery IntegrationHand-in Package: 20%

- Business and Social Vision Impact Statement Template: Step 18, Page 210.
- Per Unit Profitability Template: Step 19, Page 229
- Your Venture Story Pitch: Step 20(PowerPoint)
- Overall Pitch Design Template:Page 264



Assemble the templates from all your work above, plus any others that you found particularly meaningful, and from these, create your Team's Innovation Pitch. The book has lists specific templates that fit for each part of the final presentation.

Do not just regurgitate the templates in your pitch; rather, take the key points from them to create your own, unique presentation. The templates help you think – but most are toocomplex to present to outside people who have not taken the course. Therefore, design this pitch as if you presenting to a new set of investors.

And don't forget to add an attractive title page with your team members names and emailaddresses! You can also add an Appendix at the very back with particularly interesting information, such as industry data or the results of your customer interviews and Reality Check.

#### **Individual Innovation Assignments**

You will be required to submit two Reflection Journals as well as a maximum two pages double spaced Synthesis, Integration and Application paper by email at the Week 4 and Week 14

respectively. Please note, this exercise is not about regurgitating the course concepts.

### 1) Personal Discovery Reflection Journal (10%)

At the beginning of this semester, you will have a time to think about yourself (who you are, what you are good at, what areas you want to contribute on) using a couple of templates. After that sessions, you will have a quiet moment to think about yourself, yourcareer, and your happiness in your life. Please write 2-page reflectional journal what you feel and learning through the personal discovery sessions.

#### 2) Insight Learning Reflection Journal (10%)

At the end of this semester, you are to prepare a short reflection of impressive sessions aswell as related activities outside the classroom. Specially, (1) reflect on the key points from lectures, reading, discussion, guest speakers, and interviews, (2) apply this to your own situation, and (3) outline ways that you intend to use this knowledge in the future.

#### **Course Schedule**

Week	Session	Topics and Steps	Key CONCEPTS Introduced in Class	<b>Class Focus Activity</b>
1	1	Course Overview	<ol> <li>Why is entrepreneurship important?</li> <li>What is Personal Discovery throughEntrepreneurship?</li> <li>Four Stages; Personal Discovery, Solution Discovery, Business ModelDiscovery, Discovery Integration</li> <li>Preparation (finding interesting areas)</li> </ol>	Lecture and Discussion
	2	Personal Discovery (Step 01, Step 02)	<ol> <li>Personal Values</li> <li>Strength and Weakness</li> </ol>	<ul> <li>Individual:</li> <li>Work with the templatesprovided on pages:</li> <li>Core values: 22, 23</li> <li>Skills: 27, 28, 29, 30, 31</li> <li>Societal Contribution: 33, 34</li> </ul>
2	3	Find Teammates (Step 03)	<ol> <li>Review Problem Area Template at thebeginning of the book to find classmates who want to work on the same problem area.</li> <li>Find teammates         <ol> <li>Shared values</li> <li>Levels of commitment</li> <li>Skills and experiences (Same orDifferent?)</li> </ol> </li> </ol>	<ul> <li>Problem template: Page 9</li> <li>Talk to your classmates and find teammates. See who wants to work on in the sameproblem space, with a sharedvision of solutions, and complementary skill sets.</li> <li>Sit back and assess: Team templates on Pages 44, 45, and46.</li> <li>Prepare to present your team, the problem it is going to tackle, and its collective skills.</li> </ul>

	4	Define Purpose (Step 04) Create Mission (Step 05)	<ol> <li>Methods for defining and refining aventure's purpose</li> <li>Defining a Venture's Purpose</li> <li>Creating a Vision Statement</li> </ol>	<ul> <li>Team:</li> <li>Purpose and Mission Templates: Pages 49 and 52</li> <li>Be prepare to present to theclass.</li> <li>Personal Discovery ReflectionJournal Due</li> </ul>
3	5	Ideation & Impact (Step 06)	Ideation Methods • An in-class ideation exercise	<ul> <li>Team:</li> <li>Problem to Solve</li> <li>Templates, Step 4,</li> <li>Page</li> <li>62, and 63</li> </ul>
	6		Increasing the Impact of an Idea. (The Eat-Your-Coffee Video – a goodexample of ideation)	Team: • Idea Impact Template,Step 6, Page 69
4	7	User Insights Frameworks (Step 07)	<ul> <li>Identifyand find the right targetusers.</li> <li>Interview style and methods</li> <li>The Customer Interviewtemplate.</li> </ul>	<ul> <li>Team:</li> <li>Customer Interviews Template, Step 7, Pages 75</li> <li>Edit interview template for your project.</li> </ul>
	8		Laddering methods for interviews	Team: • Latent Needs Template,Step 7, Page 93
5	9	User Insights Customer Interviews	<ul> <li>Finding latent needs</li> <li>Field work check-in</li> </ul>	<ul> <li>Team:</li> <li>Latent Needs Template,Step 7, Page 93</li> <li>Field work – customer interviewing</li> </ul>
	10	(Step 07)	<ul> <li>Think about innovation across theentire use case</li> <li>Field work check-in</li> </ul>	<ul> <li>Team:</li> <li>Full Use Case Template, Step 7, Page 99</li> <li>Field work – customer interviewing</li> </ul>
6	11	User Insights Interpreting Results (Step	<ul> <li>Interpreting customer interviewresults</li> <li>Field work check-in</li> </ul>	<ul> <li>Team:</li> <li>Field work – customer interviewing</li> <li>Also talk to retailers/dealers if</li> </ul>
		07)		appropriate
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				appropriate
	12		<ul> <li>Idea Reshaping based on CustomerInterviews</li> <li>Field work check-in</li> </ul>	Teams prepare results ofresults from customer interviews and how the original ideas have been reshaped& improved.
7	13	User Insights Interpreting Results	<ul> <li>Customer Research Reports</li> <li>Implications for product and</li> </ul>	<ul> <li>Teams prepare PPTs forclass presentation</li> <li>Customer Insight</li> </ul>
	14	(Step 07)	servicedesign	in Deckard
8	15	Concept Design (Step 08)	<ul> <li>Defining Customer Value</li> <li>Understanding Customer ValueProposition</li> </ul>	Team: • Customer Value Proposition • Template: Step 8, Page107 • Draft the CVP
	16		• Presentation and review of CVPs	Team: • Complete CVP
9	17	<b>Competitive</b> <b>Analysis and</b> <b>Positioning</b> (Step 08)	<ul> <li>Understanding of Competitive Matrix</li> <li>Competitive positioning: creatingyour separate space</li> </ul>	<ul> <li>Team:</li> <li>Identify major competitors, and dimensions for analysis</li> <li>Template: Step 8, Page 109</li> </ul>
	18		<ul> <li>Presentations of CompetitiveAnalyses and Positionings</li> </ul>	Team: • Perform the competitive analysis and present results, including positioning
	19	<b>Product Line</b> <b>Strategy</b> (Step 09)	• Product line framework: good, better,best on underlying platforms, plus application to Services.	<ul> <li>Team:</li> <li>Identify good, better, bestvariations based on the underlying concept.</li> <li>Product line template: Page115</li> </ul>

10	20	Product Visioning Subsystem Design, and Prototype Sketch (Step 10)	<ul> <li>The structured bubble chart, showing implementation options and the team's choices</li> <li>Prototype sketching (The Bluereo Video is a good example of iterative prototyping driven by customer discovery.)</li> </ul>	<ul> <li>Team:</li> <li>Prototype sketch, and forWeb apps, a wireframe. For physical products, an initial bill of materials.</li> <li>Underlying bubble chartshowing your decision process.</li> <li>Product Vision and Subsystem Design Templates: Step 10, Pages 121 and 126</li> </ul>
11	21	Reality Check (Step 11)	• The purpose of the Reality Check, testing the product concept, channelpreferences, and much other.	Team: • Reality Check Survey Template and Results: Step11, Page 141, 143- 144
	22		<ul> <li>Guidance on the number or additionalcustomers for the reality check survey</li> <li>How to analyze and interpret theresults</li> </ul>	<ul> <li>Customize the Reality Check template for your venture.</li> <li>Do a quick round of customer surveying. Aim for 12 more interviews.</li> </ul>
12	23	Industry Analysis (Step 12)	<ul> <li>Team reports on Reality CheckResults</li> <li>Examine major components of anIndustry Analysis</li> <li>Review Templates</li> </ul>	<ul> <li>Team:</li> <li>Prepare and present the results of your reality check, plus any pivots youwish to make.</li> <li>Concept Design (and Test) Hand-in Package</li> <li>Industry Analysis Templates: Step 12, Pages 153 and 154s</li> </ul>
	24	Business Model (Step 13)	<ul> <li>Defining the Business Model:</li> <li>Lecture on basic structure anddifferent types.</li> <li>Illustrating it as the flow of product,money, and information.</li> </ul>	Team: • Business Model IllustrationTemplate, Step 13, Page 170

We ek	Sess ion	Topics and Steps	<ul> <li>Key CONCEPTS Introduced in Class</li> </ul>	Team or Individual Activity
	25		<ul> <li>Revenue and Expenses</li> <li>The key decision points in the Revenue Model</li> </ul>	Team <ul> <li>Step 14, Page 177</li> <li>Step 15, Page 187</li> <li>Step 16, Page 195</li> <li>Step 17, Pages 199 and</li> </ul>
13	26	Business Model (Steps 14, 15, 16, 17)	<ul> <li>The key decision points in the Operating Model</li> <li>Designing the Customer Journey</li> <li>Validating the Business Model (The Polka Dog Bakery Video: an example of creating a new retail experience, plus new products.)</li> </ul>	<ul> <li>200</li> <li>Validate the Revenue and Operating Model by trying to have phone calls with a few Sellers and Manufacturers to validating pricing, channels, and costs.</li> </ul>
14	27	Impact Visioning (Step 18)	<ul> <li>Develop clear statements for business and societal impact.</li> <li>Look at good existing examples of companies that do both.</li> </ul>	<ul> <li>Team:</li> <li>Start integrating your research and templates towards the final presentation, provided in Step 20, Page 264</li> <li>Business Model Design Hand-in Package</li> </ul>
	28	<b>Creating</b> <b>Value</b> (Step 19)	<ul> <li>Develop a project of the profitability in make low volumes for a product, a service, and a Web app.</li> <li>Discuss applications of the framework to your venture.</li> </ul>	<ul> <li>Team:</li> <li>Develop and present Unit of 1 Economics Template, Step 19, Page 229</li> <li>Keep working on the Final presentation</li> </ul>

We ek	Sess ion	Topics and Steps		Key CONCEPTS Introduced in Class	Team	or Individual Activity
			•	Presentation Format and Style	Team:	
					•	The PPT Presentation
			•	Format:		
				(1) Title Slide with names and		
	29			contact information		
				(2) The Target Customer and the		
				Problem to be Solved		
				(3) The Market Opportunity		
				(4) The Innovation Story		

15		Tell Your Story	<ul> <li>(5) The Business Model Story</li> <li>(6) The Customer Journey</li> <li>(7) The Team</li> <li>(8) The Proposed Action Steps.</li> <li>(9) Appendices (if needed or desired)</li> </ul>	1. The target customer & 2. The market opportunity represented
	30		<ul> <li>If you have built a prototype during the class, please bring it and show it to us!</li> <li>(The Fortify Video is a good example of how a good technical idea can translate into a business model, and next, into a well- funded venture.)</li> </ul>	<ul> <li>4. Business Model Story</li> <li>4. Business Model Story</li> <li>4. The venue</li> <li>4. The revenue</li> <li>4. Th</li></ul>
	Final Deliv	Course verables	Due on the Monday after the weekend of the final class meeting.	Team: Your Venture PPTs Individual: Insight Learning Reflection Journal

#### **Course Outcomes**

- 1. Identify one's values, passions, skills and their will to contribute to society
- 2. Formulate an idea and validate it with customers
- 3. Demonstrate prototyping and analyze the competition for the product
- 4. Create business models for revenue generation and sustainability of their business
- 5. Come up with a pitch that can used as the basis for actually starting a company based on an impactful innovation and societal impact

#### **References:**

- Meyer and Lee (2020), Personal Discovery through Entrepreneurship, The Institute for Enterprise Growth, LLC. Boston, MA., USA
- Additional readings: Additional videos, including case studies and customer interviewing methods.

### **DOSP1001: Badminton**

L	Т	Р	S	J	С
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#### **Course Description**

This course provides instruction and the opportunity for participation in sports and physical fitness activities. Skills, strategies, rules, and personal wellness goals are included as appropriate. This course will provide students with an understanding of the fundamental concepts of the physiological functions and training principles associated with the chosen sport.

#### **Course Objectives:**

- 1. Understand training principles used in the sport
- 2. Demonstrate knowledge of the game in a recreational /competitive play setting
- 3. Organize an event around the sport
- 4. Demonstrate concepts of warm up, game conditioning, training plans

#### List of Activities:

- 1. Watch a sport documentary / training video / game history
- 2. On field coaching and demonstration session
- 3. Guided practice and play
- 4. Event management & game officiating
- 5. Friendly competitions and structured matches

#### **Instructional Plan:**

- 1. Introduction to Badminton History and development
- 2. Rules of the Game, Play Area & dimensions
- 3. Fundamental Skills Badminton: Grips Racket, shuttle
- 4. Sports Specific fitness and warmup drills
- 5. Stances and footwork
- 6. Badminton Gameplay: Service, Forehand, Backhand
- 7. Preparatory Drills and Fun Games
- 8. Game Variations: Singles/ Doubles/ Mixed

#### **Course Outcomes:**

- 1. earn to play Badminton
- 2. Understanding of the fundamental concepts such as rules of play, game variations
- 3. Understanding of the governing structure and administration of the sport
- 4. Understand the event management of the sport
- 5. Apply sport concepts into an active physical lifestyle

R	eference:					
1	Uandhaak of the Dedminton Warld Education (DWE)	$\mathbf{L}$	Т	Р	S	J
1.	randbook of the Baummion world rederation (BWF)	0	0	0	2	0

### **DOSP1011: Chess**

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#### **Course Description**

This course provides instruction and the opportunity for participation in sports and physical fitness activities. Skills, strategies, rules, and personal wellness goals are included as appropriate. This course will provide students with an understanding of the fundamental concepts of the physiological functions and training principles associated with the chosen sport.

#### **Course Objectives:**

- 1. Understand training principles used in the sport
- 2. Demonstrate knowledge of the game in a recreational /competitive play setting
- 3. Organize an event around the sport
- 4. Demonstrate concepts of warm-up, game conditioning, training plans

#### List of Activities:

- 1. Watch a sport documentary / training video / game history
- 2. On field coaching and demonstration session
- 3. Guided practice and play
- 4. Event management & game officiating
- 5. Friendly competitions and structured matches

#### **Instructional Plan:**

- 1. Introduction to Chess History and development
- 2. Rules of the Game, Play Area & dimensions
- 3. Fundamental Skills Chess: Pieces & functions, basic play
- 4. Chess board moves & terminology
- 5. Chess Gameplay: Openings, castling, strategies & tactics
- 6. Preparatory Drills and Fun Games
- 7. Game Variations & Officiating

#### **Course Outcomes:**

- 1. Learn to play Chess
- 2. Understanding of the fundamental concepts such as rules of play, game variations
- 3. Understanding of the governing structure and administration of the sport
- 4. Understand the event management of the sport
- 5. Apply sport concepts into an active physical lifestyle

Reference:						
	L	Т	Р	S	J	С
1. International Chess Federation (FIDE) Handbook	0	0	0	2	0	2*

### **DOSP1031:** Football

#### **Course Description**

This course provides instruction and the opportunity for participation in sports and physical fitness activities. Skills, strategies, rules, and personal wellness goals are included as appropriate. This course will provide students with an understanding of the fundamental concepts of the physiological functions and training principles associated with the chosen sport.

#### **Course Objectives:**

- 1. Understand training principles used in the sport
- 2. Demonstrate knowledge of the game in a recreational /competitive play setting
- 3. Organize an event around the sport
- 4. Demonstrate concepts of warm up, game conditioning, training plans

#### List of Activities:

- 1. Watch a sport documentary / training video / game history
- 2. On field coaching and demonstration session
- 3. Guided practice and play
- 4. Event management & game officiating
- 5. Friendly competitions and structured matches

#### **Instructional Plan:**

- 1. Introduction to Football History and development
- 2. Rules of the Game, Play Area & dimensions
- 3. Fundamental Skills Kicking, heading, ball control, Keeping
- 4. Movement, throwins, tackling, defense, scoring, defense
- 5. Gameplay- Formations, passing, FKs, CKs, PK, tactics
- 6. Preparatory Drills and Fun Games
- 7. Game Variations: Small sided games, 7v7, 11v11

#### **Course Outcomes:**

- 1. Learn to play Football
- 2. Understanding of the fundamental concepts such as rules of play, game variations
- 3. Understanding of the governing structure and administration of the sport
- 4. Understand the event management of the sport
- 5. Apply sport concepts into an active physical lifestyle

#### **Reference:**

1. FIFA Laws of the Game

### **DOSP1041:** Volleyball

L	Т	Р	S	J	С
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#### **Course Description**

This course provides instruction and the opportunity for participation in sports and physical fitness activities. Skills, strategies, rules, and personal wellness goals are included as appropriate. This course will provide students with an understanding of the fundamental concepts of the physiological functions and training principles associated with the chosen sport.

#### **Course Objectives:**

- 1. Understand training principles used in the sport
- 2. Demonstrate knowledge of the game in a recreational /competitive play setting
- 3. Organize an event around the sport
- 4. Demonstrate concepts of warm up, game conditioning, training plans

#### List of Activities:

- 1. Watch a sport documentary / training video / game history
- 2. On field coaching and demonstration session
- 3. Guided practice and play
- 4. Event management & game officiating
- 5. Friendly competitions and structured matches

#### **Instructional Plan:**

- 1. Introduction to Volley History and development
- 2. Rules of the Game, Play Area & dimensions
- 3. Fundamental Skills Striking, Ball control, Lifting
- 4. Sports Specific fitness and warmup drills
- 5. Stances and footwork
- 6. Preparatory Drills and Fun Games
- 7. Gameplay: Jumps, strikes, layoffs, attack, defense

#### **Course Outcomes:**

- 1. Learn to play Volleyball
- 2. Understanding of the fundamental concepts such as rules of play, game variations

- 3. Understanding of the governing structure and administration of the sport
- 4. Understand the event management of the sport
- 5. Apply sport concepts into an active physical lifestyle

#### **Reference:**

1. FIVB - Official Volleyball Rules

### DOSP1051: Kabaddi

$\mathbf{L}$	Т	Р	S	J	С
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#### **Course Description**

This course provides instruction and the opportunity for participation in sports and physical fitness activities. Skills, strategies, rules, and personal wellness goals are included as appropriate. This course will provide students with an understanding of the fundamental concepts of the physiological functions and training principles associated with the chosen sport.

#### **Course Objectives:**

- 1. Understand training principles used in the sport
- 2. Demonstrate knowledge of the game in a recreational /competitive play setting
- 3. Organize an event around the sport
- 4. Demonstrate concepts of warm up, game conditioning, training plans

#### **List of Activities:**

- 1. Watch a sport documentary / training video / game history
- 2. On field coaching and demonstration session
- 3. Guided practice and play
- 4. Event management & game officiating
- 5. Friendly competitions and structured matches

#### **Instructional Plan:**

- 1. Introduction to Kabaddi History and development
- 2. Rules of the Game, Play Area & dimensions
- 3. Fundamental Skills Raiding, catching
- 4. Sports Specific fitness and warmup drills
- 5. Stances and footwork
- 6. Preparatory Drills and Fun Games
- 7. Gameplay: Chain system movement

#### **Course Outcomes:**

1. Learn to play Kabaddi

- 2. Understanding of the fundamental concepts such as rules of play, game variations
- 3. Understanding of the governing structure and administration of the sport
- 4. Understand the event management of the sport
- 5. Apply sport concepts into an active physical lifestyle

#### **Reference:**

- 1. Amateur Kabaddi Federation of India (AKFI) Official Rules
- 2. Rules of Kabadddi International Kabaddi Federation

### **DOSP1091: Basketball**

L	Т	Р	S	J	С
0	0	0	2	0	2*

#### **Course Description**

This course provides instruction and the opportunity for participation in sports and physical fitness activities. Skills, strategies, rules, and personal wellness goals are included as appropriate. This course will provide students with an understanding of the fundamental concepts of the physiological functions and training principles associated with the chosen sport.

#### **Course Objectives:**

- 1. Understand training principles used in the sport
- 2. Demonstrate knowledge of the game in a recreational /competitive play setting
- 3. Organize an event around the sport
- 4. Demonstrate concepts of warm up, game conditioning, training plans

#### **List of Activities:**

- 1. Watch a sport documentary / training video / game history
- 2. On field coaching and demonstration session
- 3. Guided practice and play
- 4. Event management & game officiating
- 5. Friendly competitions and structured matches

#### **Instructional Plan:**

- 1. Introduction to Basketball History and development
- 2. Rules of the Game, Play Area & dimensions
- 3. Fundamental Skills Passing, Receiving, Dribbling
- 4. Sports Specific fitness and warmup drills
- 5. Stances and footwork: Jumps, dribbles, catching, throws
- 6. Preparatory Drills and Fun Games
- 7. Gameplay: Shots, throws, movements, attack, defence

#### **Course Outcomes:**

- 1. Learn to play Basketball
- 2. Understanding of the fundamental concepts such as rules of play, game variations
- 3. Understanding of the governing structure and administration of the sport
- 4. Understand the event management of the sport
- 5. Apply sport concepts into an active physical lifestyle

#### **Reference:**

**1.** FIBA Basketball Official Rules

### **DOSP1111: Throwball**

L	Т	Р	S	J	С
0	0	0	2	0	2*

#### **Course Description**

This course provides instruction and the opportunity for participation in sports and physical fitness activities. Skills, strategies, rules, and personal wellness goals are included as appropriate. This course will provide students with an understanding of the fundamental concepts of the physiological functions and training principles associated with the chosen sport.

#### **Course Objectives:**

- 1. Understand training principles used in the sport
- 2. Demonstrate knowledge of the game in a recreational /competitive play setting
- 3. Organize an event around the sport
- 4. Demonstrate concepts of warm up, game conditioning, training plans

#### List of Activities:

- 1. Watch a sport documentary / training video / game history
- 2. On field coaching and demonstration session
- 3. Guided practice and play
- 4. Event management & game officiating
- 5. Friendly competitions and structured matches

#### **Instructional Plan:**

- 1. Introduction to Throwball History and development
- 2. Rules of the Game, Play Area & dimensions
- 3. Fundamental Skills Throwing, Receiving
- 4. Sports Specific fitness and warmup drills
- 5. Stances and footwork
- 6. Preparatory Drills and Fun Games
- 7. Gameplay: Shots, throws, movements, control

#### **Course Outcomes:**

- 1. Learn to play Throwball
- 2. Understanding of the fundamental concepts such as rules of play, game variations
- 3. Understanding of the governing structure and administration of the sport

- 4. Understand the event management of the sport
- 5. Apply sport concepts into an active physical lifestyle

#### **Reference:**

1. World Throwball Federation - Rules of the Game

### **DOSL1001: Club Activity – Participant**

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#### **Course Description**

This course recognizes student participation in multiple activities organized by various student organizations that pursue specific co-curricular and extra-curricular interests. These activities allow students to engage in and identify and pursue their personal interests and hobbies.

#### **Course Objectives**

- Create opportunities for students to participate in a variety of non-academic experiences
- Interact with and learn from peers in a setting without an external performance pressure
- Allow exploration of interesting activities and reflection about these experiences
- Learn to manage time effectively

#### List of Student Club Activities

- 1. Music (vocals, instruments, technical, recording, mixing, production, management)
- 2. Dance (Indian classical, western, jazz, latin, contemporary, folk, production, event management)
- 3. Theatre (classical, experimental, one-act, street, production, direction, casting, etc.)
- 4. Arts (fine arts, painting, calligraphy, sketching, caricaturing, etc)
- 5. Craft (origami, model making, sculpture, pottery, etc)
- 6. Cooking (home-style, baking, confectionery, Indian, intercontinental, etc.)
- 7. Graffiti (street, mural, collage, multimedia etc)
- 8. Workshops, quizzes, debates, elocution, etc
- 9. Filmmaking (adventure, drama, film appreciation, documentary, etc)
- 10. Photography (conventional, immersive (360), landscape, portrait, technical, editing, etc.)
- 11. College Fests
- 12. Designing (graphic design, landscape, interior, etc)
- 13. Competitive coding
- 14. Recreational sports activities
- 15. Other club activities organized by student clubs

#### List of Activities

- 1. Participation in various club based activities
- 2. Weekly reflection paper
- 3. Portfolio (on social media using an instagram account)
- 4. Two learning papers (one per semester)

#### **Text Books**

- 1. Small move: big Change (Caroline Arnold)
- 2. How to Win at College: Surprising Secrets for Success from the Country's Top Students (Cal Newport)

#### References

- 1. Making the most of college: Students speak their minds (author Richard Light)
- 2. Failing Forward: Turning Mistakes into Stepping Stones for Success (John C Maxwell)
- 3. The Last Lecture (Randy Pausch)
- 4. Lean in (Sheryl Sandberg)
- 5. Youtube- Introduction to various club activities

#### **Course Outcomes**

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

- Identify personal interest areas
- Learn from diverse perspectives and experiences
- Gain exposure to various activities and opportunities for extra-curicular activities
- Learn to manage time effectively
- gain confidence

### **DOSL1011: Club Activity – Member of the Club**

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#### **Course Description**

This course encourages and acknowledges student members' work in organizing events and activities organized by various student organizations that pursue specific co-curricular and extracurricular interests. These activities allow students to actively learn from the process of conceptualizing and organizing such activities as part of a team.

#### **Course Objectives**

- Create opportunities for students to learn from organizing club activities
- Learn teamwork, leadership, planning and management of events and activities
- Learn to appreciate multiple perspectives, cultures, and individual capabilities
- Learn to manage time effectively

#### List of Student Club Activities

- 1. Music (vocals, instruments, technical, recording, mixing, production, management)
- 2. Dance (Indian classical, western, jazz, latin, contemporary, folk, production, event management)
- 3. Theatre (classical, experimental, one-act, street, production, direction, casting, etc.)
- 4. Arts (fine arts, painting, calligraphy, sketching, caricaturing, etc)
- 5. Craft (origami, model making, sculpture, pottery, etc)
- 6. Cooking (home-style, baking, confectionery, Indian, intercontinental, etc.)
- 7. Graffiti (street, mural, collage, multi media, etc)
- 8. Workshops, quizzes, debates, elocution, etc
- 9. Filmmaking (adventure, drama, film appreciation, documentary, etc)
- 10. Photography (conventional, immersive (360), landscape, portrait, technical, editing, etc.)
- 11. College Fests
- 12. Designing (graphic design, landscape, interior, etc)
- 13. Competitive coding
- 14. Recreational sports activities
- 15. Other club activities organized by student clubs

#### **List of Activities**

- 1. Be a member of a club and organize activities in that particular interest area
- 2. Learn from diverse perspectives and experiences
- 3. Learn to design and execute extra-curicular activities
- 4. Develop management skills through hands on experience

5. Explore different managerial roles and develop competencies

#### **Course Outcomes**

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

- Be a member of a club and organize activities in that particular interest area
- Learn from diverse perspectives and experiences
- Learn to design and execute extra-curicular activities
- Develop management skills through hands on experience
- Explore different managerial roles and develop competencies

#### **Text Books**

- 1. Small move: big Change (Caroline Arnold)
- 2. How to Win at College: Surprising Secrets for Success from the Country's Top Students (Cal Newport)

#### References

- 1. Making the most of college: Students speak their minds (author Richard Light)
- 2. Failing Forward: Turning Mistakes into Stepping Stones for Success (John C Maxwell)
- 3. The Last Lecture (Randy Pausch)
- 4. Lean in (Sheryl Sandberg)
- 5. Youtube- Introduction to various club activities

### DOSL1021: Club Activity – Leader of the Club

# Course Description L T P S J C 0 0 0 2 0 2\*

This course encourages and recognizes student members' work in leading the student organizationsthrough various leadership roles. As leaders they work not just to organize events and activities inspecific co-curricular and extracurricular interests, but also lead the teams that form the core members of the clubs. These activities allow students to learn and practice leadership and management skills through real world experience.

#### **Course Objectives**

- Create opportunities for students to learn from organizing club activities
- Learn teamwork, leadership, planning and management of events and activities
- Learn to appreciate multiple perspectives, cultures, and individual capabilities
- Learn to manage time effectively

#### List of Student Club Activities

- 1. Music (vocals, instruments, technical, recording, mixing, production, management)
- 2. Dance (Indian classical, western, jazz, latin, contemporary, folk, production, event management)
- 3. Theatre (classical, experimental, one-act, street, production, direction, casting, etc.)
- 4. Arts (fine arts, painting, calligraphy, sketching, caricaturing, etc)
- 5. Craft (origami, model making, sculpture, pottery, etc)
- 6. Cooking (home-style, baking, confectionery, Indian, intercontinental, etc.)
- 7. Graffiti (street, mural, collage, multimedia, etc)
- 8. Workshops, quizzes, debates, elocution, etc
- 9. Filmmaking (adventure, drama, film appreciation, documentary, etc)

10. Photography (conventional, immersive (360), landscape, portrait, technical, editing, etc.) 11. College Fests

- 12. Designing (graphic design, landscape, interior, etc)
- 13. Competitive coding
- 14. Recreational sports activities
- 15. Other club activities organized by student clubs

#### List of Activities

- 1. Be the leader of the club and implement the charter, vision and mission of the club
- 2. Learn from diverse perspectives and experiences
- 3. Learn to lead the team, design and execute extra-curicular activities
- 4. Develop management skills through hands on experience
- 5. Explore different managerial roles and develop competencies

#### **Text Books**

- 1. Small move: big Change (Caroline Arnold)
- 2. How to Win at College: Surprising Secrets for Success from the Country's Top Students (Cal Newport)

#### References

- 1. Making the most of college: Students speak their minds (author Richard Light)
- 2. Failing Forward: Turning Mistakes into Stepping Stones for Success (John C Maxwell)
- 3. The Last Lecture (Randy Pausch)
- 4. Lean in (Sheryl Sandberg)
- 5. Youtube- Introduction to various club activities

#### **Course Outcomes**

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

- Be the leader of the club and implement the charter, vision and mission of the club
- Learn from diverse perspectives and experiences
- Learn to lead the team, design and execute extra-curricular activities
- Develop management skills through hands on experience
- Explore different managerial roles and develop competencies

### **DOSL1031: Club Activity – Competitor**

	L	Т	Р	S	J	С
Course Description:	0	0	0	2	0	2*

This course encourages and recognizes student members' work in leading the student organizations through various leadership roles. As leaders they work not just to organize events and activities in specific co-curricular and extra-curricular interests, but also lead the teams that form the core members of the clubs. These activities allow students to learn and practice leadership and management skills through real world experience.

#### **Course Objectives**

- Create opportunities for students to learn from organizing club activities
- Learn teamwork, leadership, planning and management of events and activities
- Learn to appreciate multiple perspectives, cultures, and individual capabilities
- Learn to manage time effectively

#### List of Student Club Activities

- 1. Music (vocals, instruments, technical, recording, mixing, production, management)
- 2. Dance (Indian classical, western, jazz, latin, contemporary, folk, production, eventmanagement)
- 3. Theatre (classical, experimental, one-act, street, production, direction, casting, etc.)
- 4. Arts (fine arts, painting, calligraphy, sketching, caricaturing, etc)
- 5. Craft (origami, model making, sculpture, pottery, etc)
- 6. Cooking (home-style, baking, confectionery, Indian, intercontinental, etc.)
- 7. Graffiti (street, mural, collage, multimedia, etc)
- 8. Workshops, quizzes, debates, elocution, etc
- 9. Filmmaking (adventure, drama, film appreciation, documentary, etc)
- 10. Photography (conventional, immersive (360), landscape, portrait, technical, editing, etc.)
- 11. College Fests
- 12. Designing (graphic design, landscape, interior, etc)
- 13. Competitive coding
- 14. Recreational sports activities
- 15. Other club activities organized by student clubs

#### List of Activities

- 1. Be the leader of the club and implement the charter, vision and mission of the club
- 2. Learn from diverse perspectives and experiences
- 3. Learn to lead the team, design and execute extra-curicular activities
- 4. Develop management skills through hands on experience

5. Explore different managerial roles and develop competencies

#### **Course Outcomes**

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

- Be the leader of the club and implement the charter, vision and mission of the club
- Learn from diverse perspectives and experiences
- Learn to lead the team, design and execute extra-curricular activities
- Develop management skills through hands on experience
- Explore different managerial roles and develop competencies

#### **Text Books**

- 1. Small move: big Change (Caroline Arnold)
- 2. How to Win at College: Surprising Secrets for Success from the Country's Top Students(Cal Newport)

#### References

- 1. Making the most of college: Students speak their minds (author Richard Light)
- 2. Failing Forward: Turning Mistakes into Stepping Stones for Success (John C Maxwell)
- 3. The Last Lecture (Randy Pausch)
- 4. Lean in (Sheryl Sandberg)
- 5. Youtube- Introduction to various club activities

### **POLS1001: Indian Constitution and History**

L	Т	Р	S	J	С
2	0	0	0	0	2*

#### **Course Description:**

This course analyzes the basic structure and operative dimensions of the Indian Constitution. It explores various aspects of the Indian political and legal system from a historical perspective highlighting the various events that led to the making of the Indian Constitution. The course also deals with various challenges faced by the constitution and its coping mechanisms. Broadly, the students would understand and explain the working of different institutions and political debates ensuing from the operation of the Indian constitution in action.

#### **Course Objectives:**

- 1. To introduce constitutional history of India.
- 2. To explain the process of making Indian constitution
- 3. To analyze Fundamental of Rights, Duties and other principles in constitution
- 4. To create familiarity with political developments which shaped the constitution.

#### **Course Outcomes:**

On the successful completion of the course students would be able to:

- 1.Demonstrate an understanding of the Constitution of India and how constitutional governance is carried out in India
- 2.Interpret knowledge of the Fundamental Rights and Duties of the Citizens as well as the Obligation of the state towards its citizens
- 3.Correlate familiarity with key political developments that have shaped the Constitution and amended it from time to time.
- 4. Equip themselves to take up other courses in law after having done a foundation course on Indian Constitution

#### Unit I: India as a Nation

6 hrs

Khilani, S. (2004). *Introduction, The Idea of India*, Chapter 1. New Delhi: Penguin Books, pp. 1-15. Rowat, D. (1950). 'India: The Making of a Nation', *International Journal*, 5(2), 95-108. doi:10.2307/40194264

Brass, P. (2018). 'Continuities and Discontinuities between pre- and post-Independence India', Chapter 1. *The Politics of Idea since independence*, New Delhi: Cambridge University Press. pp. 1-30.

#### Module Learning Outcomes

- 1. Understand ideas of India
- 2. Explain the story behind making constitution and its future.
- 3. Articulate the differences between pre and post-colonial governments.

#### **Unit 2: Understanding the Constitution**

Mehta, U.S. (2011). 'Constitutionalism' in *The Oxford Companion to Politics in India*, (ed) by Nirja Gopal Jayal, and Pratap Bhanu Mehta, New Delhi: Oxford University Press. pp. 15-27.

Austin, G. (2016), 'The Constituent Assembly: Microcosm in Action' in *The Indian Constitution: Cornerstone of a Nation*, New Delhi: Oxford University Press, pp. 1-25.

Beteille, Andre (2008): "Constitutional Morality," *Economic and Political Weekly*, Vol 43, Issue No 40

Prahladan, Vivek (2012): "Emergence of the Indian Constitution," *Economic and Political Weekly*, Vol 47, Issue No 07.

#### Module Learning Outcomes

Understand the concept of constitutionalism. Demonstrate strength or weakness of constitutional morality in India

Evaluate constituent assembly debates in framing Indian Constitution.

#### Unit 3: The Preamble, Fundamental Rights and Directive Principles of State Policy 6 hrs

Bhakshi, P.M. (2011). 'Preamble' in *The Constitution of India*, New Delhi: Universal Law. Pp. 1-5. Laxmikanth, M. (2017). 'Chapter IV: Preamble of the Constitution' in *Indian Polity*, Chennai: McGraw Hills.

Kumar, Virendra (2007): "Basic Structure of The Indian Constitution: Doctrine of Constitutionally Controlled Governance [From Kesavananda Bharati to I.R. Coelho]" *Journal of the Indian Law Institute*, Vol 49, No 3, pp 365-398.

Austin, G (2016), ' ' in *The Indian Constitution: Cornerstone of a Nation*, New Delhi: Oxford University Press, pp.63-105.

Reddy, S (1980). Fundamental Ness of Fundamental Rights and Directive Principles in the Indian Constitution. *Journal of the Indian Law Institute*, 22(3), pp. 399-407.

Bhatia, Gautam (2017): "The Supreme Court's Right to Privacy Judgement," *Economic and Political Weekly*, Vol 52, Issue No 44

#### Module Learning Outcomes

- 1. Explain the relationship between 'Preamble' and 'The constitution'.
- 2. Interpret the key concepts of preamble
- 3. Analyzes the dynamic nature of Indian constitution
- 4. Understanding Fundamental Rights
- 5. Evaluate Directive Principles of State Policy
- 6. Interpret case studies on Fundamental Rights.

#### Unit 4: Citizenship

Jayal, N.G. (2019). 'Reconfiguring citizenship in contemporary India' in *South Asia Journal of South Asian Studies*, pp.33-58.

Roy, Anupama. (2010). 'Chapter I: Enframing the citizen in contemporary times' in *Mapping Citizenship in India*, New Delhi: Oxford University Press.

Das, Veena (2010): "State, Citizenship and the Urban Poor," Citizenship Studies, Vol 15, pp 319-

6 hrs

#### 333. Valerian Rodrigues Module Learning Outcomes

- 1. Explain different dimensions of citizenship in Indian context
- 2. Evaluate the basis of citizenship
- 3. Compare 'claim' and 'status' of citizenship

#### **Unit 5: Separation and Distribution of Powers**

#### 6 hrs

Pal, Ruma. (2016). 'Separation of Powers' in *The Oxford Handbook of the Indian Constitution*, (ed) by Sujit Choudhry, Madhav Khosla, and Pratap Bhanu Mehta, Delhi: Oxford University Press. Bakshi, P. (1956). 'Comparative Law: Separation of Powers in India'. *American Bar Association Journal*, *42*(6), 553-595.

Rao, P. (2005). 'Separation of Powers in a Democracy: The Indian Experience'. *Peace Research*, 37(1), 113-122.

Kumar, Ashwani (2019): "Constitutional Rights, Judicial Review and Parliamentary Democracy," *Economic and Political Weekly*, Vol 51, Issue 15

Tillin, Louise. (2015). 'Introduction' in *Indian Federalism*. New Delhi: Oxford University Press. pp. 1-30.

Chakrabarty, Bidyut and Rajendra Kumar Pandey. (2008). *Federalism' in Indian Government and Politics*, New Delhi: Sage Publications. pp. 35-53.

Arora, B. and Kailash, K. K. (2018). 'Beyond Quasi Federalism: Change and Continuity in Indian Federalism', in *Studies in Indian Politics*, pp. 1-7.

Agrawal, Pankhuri (2020): "COVID-19 and dwindling Indian Federalism," *Economic and Political Weekly*, Vol 55, Issue No 26

#### Module Learning Outcomes

- 1. Explain the importance of separation of powers in a democracy
- 2. Understand the relation between three organs of the government
- 3. Evaluate the system of 'checks and balances'
- 4. Understand the difference between unitary and federal political systems
- 5. Critically analyze the Indian model of Federalism
- 6. Evaluate the distribution of responsibilities between union and state governments.

#### **Recommended Readings:**

De, Rohit. (2018). *A People's Constitution – The Everyday Life of Law in the Indian Republic*, USA: Princeton University Press.

Granville Austin, The Indian Constitution: Cornerstone of a Nation, Oxford University Press, Oxford, 1966.

Lahoti, R.C. (2004). *Preamble: The Spirit and Backbone of the Constitution of India*. Delhi: Eastern Book Company.

Rajeev Bhargava (ed), *Ethics and Politics of the Indian Constitution*, Oxford University Press, New Delhi, 2008.

Subhash C. Kashyap, Our Constitution, National Book Trust, New Delhi, 2011.

Tillin, Louise. (2015). Indian Federalism. New Delhi: Oxford University Press.

Zoya Hassan, E. Sridharan and R. Sudarshan (eds), *India's Living Constitution: Ideas, Practices, Controversies*, Permanent Black, New Delhi, 2002.

### PHPY1001: Gandhi for the 21st Century

L T P S J C 2 0 0 0 0 2\*

#### **Course Description**

This course provides the students with basic knowledge on Gandhi's early life, transformations in South Africa and his entry into India's national movement. While going through the social-political, economic and educational philosophies of Gandhi, the course analyses how his ideologies are relevant even in the 21st century.

#### **Course Objectives**

The objectives of the course are;

- 1. To provide the students with the basic knowledge on Gandhi's life and his philosophies
- 2. To understand the early influences and transformations in Gandhi
- 3. To analyse the role of Gandhi in India's national movement
- 4. To apply Gandhian Ethics while analysing the contemporary social/political issues
- 5. To appreciate the conflict resolution techniques put forward by Gandhi and its significance in the current scenario.

#### Module I : MK Gandhi: Childhood and Education

M K Gandhi, Formative Years (1869-1893): Early childhood - study in England - Indian influences, early Western influences.

#### Module II: From Mohan to Mahatma-South African Experiences

Gandhi in South Africa (1893-1914): South African Experiences - civil right movements in South Africa - invention of Satyagraha - Phoenix settlement- Tolstoy Farm - experiments in Sarvodaya, education, and sustainable livelihood.

#### Module III: Gandhi and Indian National Movement

Gandhi and Indian National Movement (1915-1947): Introduction of Satyagraha in Indian soil -noncooperation movement - call for women's participation - social boycott - Quit-India movement fighting against un-touchability - Partition of India- independence.

#### Module IV: Gandhi and Sustainable Development

Gandhian Constructive Programs-Eleven Vows-Sarvodaya-Seven Social Sins-Gandhian Economics and Sustainable Development

#### Module V: Gandhi and Contemporary Issues

Conflict Resolution Techniques of Gandhi-Ecological Challenges and Gandhian solutions-Gandhian Ethics-An Analysis

#### **Learning Outcomes**

- 1. To understand the life of Gandhi
- 2. To understand the role of Gandhi in Indian national movement
- 3. To analyse the origin and significance of Satyagraha

- 4. To understand the eleven vows of Gandhi which he followed through-out his life.
- 5. To examine the significance of constructive programs today

#### **Course Outcomes**

After the successful completion of the course the students will be able to;

- 1. Understand the life of Gandhi
- 2. Appreciate the role of Gandhian non-violence and Satyagraha in India's freedom struggle.
- 3. Critically examine the philosophy of Gandhi on Education, Sarvodaya, and Satyagraha
- 4. Analyse the contemporary significance of Gandhian constructive programmes and eleven vows
- 5. Examine the possible solutions for some of the contemporary challenges like environmental issues, moral degradation and ethical dilemmas.

#### References

- 1. Gandhi, M K. (1941). Constructive Programme. Ahmadabad: Navjivan Publishing House
- 2. Gandhi, M. K. (1948). *The Story of My Experiments with Truth*. Ahmadabad: Navjivan Publishing House
- 3. Gandhi, M K. (1968). Satyagraha in South Africa. Ahmadabad: Navjivan Publishing House.
- 4. Khoshoo, T N (1995). Mahatma Gandhi: An Apostle of Applied Human Ecology. New Delhi: TERI
- 5. Kripalani, J.B. (1970). Gandhi: His Life and Thought. New Delhi: Publications Division.
- 6. Narayan, Rajdeva (2011). Ecological Perceptions in Gandhism and Marxism. Muzaffarpur: NISLS
- 7. Pandey, J. (1998). Gandhi and 21st Century. New Delhi: Concept.
- 8. Weber, Thomas (2007).Gandhi as Disciple and Mentor. New Delhi: CUP

### **DOSL1041: Community Services - Volunteer**

	L	Т	Р	S	J	С
Course Description:	0	0	0	0	2	2*

This course recognizes student participation in Community service activities organized by variousstudent organizations and other Government and non-government organizations that exist for providing service to communities. These activities allow students to develop empathy, citizenshipbehavior and community values.

#### **Course Objectives**

- To help students develop empathy and citizenship behavior
- Enable students to develop an altruistic attitude and community development sensibility
- Allow exploration of community service activities and reflect about these experiences
- Learn to work in small and large teams for achieving community objectives

#### List of Community Service Activities

- 1. Community Health Services
- 2. Swachh Bharat Abhiyan and other Cleanliness drives
- 3. Tree Plantation and similar environmental conservation initiatives
- 4. Rain water harvesting awareness and implementation
- 5. Fundraising and visits to Orphanages, Old-age homes, etc.
- 6. Health and disease awareness programs
- 7. Working with NGOs
- 8. Disaster mitigation and management training and relief work
- 9. Rural Upliftment projects
- 10. Campus awareness and action projects (cleanliness, anti-ragging, blood donation, etc)
- 11. Community investigations and surveys for development research
- 12. Educational support for underprivileged (remedial classes, coaching, training, etc)
- 13. Service camps
- 14. Advocacy and information literacy initiatives
- 15. Other activities serving local communities

#### **List of Activities**

- 1. Participation in various community service activities
- 2. Weekly reflection paper
- 3. Portfolio (on social media using an instagram account)
- 4. Two learning papers (one per semester)

#### **Text Books**

- 1. Soul of a citizen: living with conviction in Challenging times (author: Paul Rogat Loeb)
- 2. Community Services intervention: Vera Lloyd

#### References

- 1. A path appears: Transforming lives, creating opportunities (Nicholas Kristof and Sheryl WuDunn)
- 2. The story of My Experiments with Truth (author: M. K. Gandhi)

#### **Course Outcomes**

- Experience of volunteering in a variety of Community service activities
- Gaining empathy for lesser privileged sections of society by experience
- Understanding the process of generating community awareness
- Understanding Disaster management and relief through training and experience
- Developing environmental and sustainability awareness

### **DOSL1051: Community Services - Mobilizer**

#### Course Description

L T P S J C 0 0 0 0 2 2\*

This course recognizes student leadership in mobilizing community service activities as members of various student organizations or other Government and non-government organizations that exist for providing service to communities. These activities allow students to develop leadership, management skills, empathy, citizenship behavior and community values.

#### **Course Objectives**

- To help students understand leadership in a community environment
- Enable students to develop an altruistic attitude and community development sensibility
- Allow deep understanding of community service through practical experience
- Learn to lead small and large teams for achieving community objectives

#### List of Community Service Activities

- 1. Community Health Services
- 2. Swachh Bharat Abhiyan and other Cleanliness drives
- 3. Tree Plantation and similar environmental conservation initiatives
- 4. Rain water harvesting awareness and implementation
- 5. Fundraising and visits to Orphanages, Old-age homes, etc.
- 6. Health and disease awareness programs
- 7. Working with NGOs
- 8. Disaster mitigation and management training and relief work
- 9. Rural Upliftment projects
- 10. Campus awareness and action projects (cleanliness, anti-ragging, blood donation, etc)
- 11. Community investigations and surveys for development research
- 12. Educational support for underprivileged (remedial classes, coaching, training, etc)
- 13. Service camps
- 14. Advocacy and information literacy initiatives
- 15. Other activities serving local communities

#### **List of Activities**

- 1. Organizing and leading teams in various community service activities
- 2. Fortnightly reflection paper
- 3. Portfolio (on social media using an instagram account)
- 4. Two learning papers (one per semester)

#### **Text Books**

- 1. Soul of a citizen: living with conviction in Challenging times (author: Paul Rogat Loeb)
- 2. Community Services intervention: Vera Lloyd

#### References

- 1. A path appears: Transforming lives, creating opportunities (Nicholas Kristof and SherylWuDunn)
- 2. The story of My Experiments with Truth (author: M. K. Gandhi)
- 3. List of student run and and other Government and non-government community serviceorganizations organizations

#### **Course Outcomes**

- Experience of mobilizing and executing Community service activities
- Providing opportunities for community service volunteering for other fellow students
- Understanding the process of mobilizing cash, kind and volunteer support
- Building leadership and management skills
- Building empathy and citizenship behavior

### **ENVS1001: Environmental Studies**

#### **Course Description**

#### L T P S J C 3 0 0 0 0 3\*

The course enables the students to adapt eco-centric thinking and actions rather than human-centric thinking on natural resources, their utilization and conservation. The course also focuses on the importance of ecosystems, biodiversity and their degradation led to pollution. This course helps in finding solutions through application of control measures to combat pollution and legal measures to achieve sustainable development.

#### **Course Objectives**

- 1. To impart knowledge on natural resources and its associated problems.
- 2. To familiarize learners about ecosystem, biodiversity, and their conservation.
- 3. To introduce learners about environment pollution.
- 4. To acquaint learners on different social issues such as conservation of water, green building concept.
- 5. To make learners understand about the present population scenario, its impacts and role of informational technology on environment and human health.
- 6. To make learners understand about the importance of field visit.

#### Syllabus

UNIT – I Multidisciplinary nature of environmental studies	No of Hours:									
& Natural Resources:	12									
Multidisciplinary nature of environmental studies Definition, scope and importance. Need										
for public awareness. Natural resources and associated problems. Uses an	for public awareness. Natural resources and associated problems. Uses and over exploitation									
of Forest resources, Waterresources, Mineral resources, Food resources,	Energy resources,									
Land resources. Role of an individual in conservation of natural resource	s. Equitable use of									
resources for sustainable lifestyles.										
Activity:										
1. Planting tree saplings										
2. Identification of water leakage in house and institute-Rectify or re	eport									
3. Observing any one day of a week as Car/bike/vehicle free day.										
Learning Outcomes:										
After completion of this unit, the student will be able to										
• List different natural resources and their uses.	L1									
Relate how the over-exploitation of natural resources impact	T 1									
human life										
• Find the role of an individual in the conservation of natural	L1									
resources.	<b>T</b> 1									
• Recall the demand of potable water in a community.	LI									
• Explain the equitable use of natural resources for sustainable lifestyles.	L2									
<b>Pedagogy tools:</b> Blended learning, Case let, video lectures, self-reading										
UNIT – Ecosystem and biodiversity	No of Hours:									
	12									

**Ecosystem:** Structure components of ecosystem: Biotic and Abiotic components. Functional components of an ecosystem: Food chains, Food webs, Ecological pyramids, Energy flow in the ecosystem (10% law), Ecological succession. Biogeochemical cycle: (Nitrogen, carbon, Phosphorus cycle).

**Biodiversity:** Definition, Biogeographical classification of India, Values of biodiversity: consumptive use, productive use, social, ethical, aesthetic and optional values. Hot-spots of biodiversity. Threats to biodiversity: habitat loss, poaching, man wildlife conflicts. Conservation of biodiversity: In – situ and Ex-situ

Activity"

- 1. Visit to Zoological Park-Noting different ecosystem
- 2. Biodiversity register- Flora and fauna in the campus

Learning Outcomes:

0		
After com	pletion of this unit, the student will be able to	
•	Demonstrate how ecosystem functions.	L2
•	Summarize the structure and function of terrestrial and aquatic ecosystems.	L2
•	Explain the values and threats to biodiversity.	L2
•	Identify the importance of conservation of biodiversity.	L3
Pedagogy t	als: Blended learning Case let video lectures self-reading	

edagogy tools: Blended learning, Case let, video lectures, self-readin

UNIT – Environmental Pollution

No of Hours: 12

Definition Causes, effects, and control measures of: -Air pollution. Water pollution. Soil pollution. Marine pollution. Noise pollution. Nuclear hazards. Solid waste Management: Causes, effects, and control measures. Role of an individual in prevention of pollution. Pollution case studies. Activity

- 1 Visit to treatment plant and d
- 1. Visit to treatment plant and documentation.
- 2. Documentation of segregation of solid waste-Dry and Wet

#### Learning Outcomes:

After compl	etion of this unit, the student will be able to	
•	Identify causes, effects, and control measures of pollution (air, water & soil).	L3
•	Choose different types of pollutants.	L3
•	Experiment with the pollution related case studies.	L3
•	Solve solid waste issues but appropriate management techniques.	L3
•	Analyse the role of an individual in prevention of pollution.	L4

Pedagogy tools: Blended learning, Case let, video lectures, self-reading

## UNIT – IV Social Issues and the Environment No of Hours: 10 10

From Unsustainable to Sustainable development Urban problems related to energy. Water conservation, rainwater harvesting, watershed management. Resettlement and rehabilitation of people; its problems and concerns related to mining, dams, Case Studies. Environmental ethics: Issues and possible solutions. Green building concept, Role of remote sensing and GIS in ground water exploration.

Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies. Wasteland reclamation.

Activity:

- 1. Observing zero hour at individual level-documentation.
- 2. Eco friendly idols.
- 3. Rainwater harvesting-creating storage pits in nearby area.

#### Learning Outcomes:

After compl	letion of this unit, the student will be able to	
•	Examine different water conservation methods.	L4
•	Survey remote sensing and GIS methods in exploration of ground water.	L4
•	Function of green building concept.	L4
•	Discover the consequences of global warming, acid rains and ozone layer	L4
	depletion.	

•	Improv	e wast	eland r	reclam	ation.							L	5
Pedagogy	tools: Ble	nded l	earning	g, Case	e let, vi	ideo lec	tures, s	elf-read	ling				
UNIT - V	Human Act an	n Popu d Fielo	ilation d work	and the	he Env	vironm	ent and	l Envir	onment	Protect	ion	No o 12	f Hours:
Population	growth,	variati	on ame	ong na	tions.	Family	Welfaı	e prog	ramme. I	Environi	ment an	d human	health.
HIV/AIDS	Human	rights.	Value	Educa	tion. V	Vomen	and Ch	ild We	lfare. Ro	le of Inf	formatio	n Techn	ology in
Environme	nt and hur	nan he	alth. Er	nvironi	nent L	egislati	on. Air	(Prever	ntion and	Control	of Pollu	tion) Ac	t. Water
(Preventior	and Cor	trol of	Pollut	tion) A	ct. Wi	ldlife P	rotectic	n Act.	Forest C	onserva	tion Act	. Enviro	nmental
Protection	Act, Issue	es invo	lved in	enfor	cement	t of env	ironme	ntal leg	islation.	Public a	warenes	s.	
Activity:													
1. Vi	sit to a lo	cal pol	lluted s	site-ind	lustry/a	agricult	ıre						
2. Id	entifying	diseas	es due	to inap	propri	ate envi	ronmei	ntal cor	nditions				
Learning (	<u>Jutcomes</u>	S:	5 at .		11.1	1. 1 4							
After comp	Dradiat	this un	it, the s	studen	t Will t	be able t	0	notiona					15
•	Predict	popul	ation g	nowin	and va	mation	among	nations					LJ
•	Adapt	value e	ducatio	on.									L5
•	Discus	s wom	en and	child y	welfare	e.							L5
•	Theoriz	ze diffe	erent er	nvironi	nental	legislat	ion act	s and is	sues invo	olved in			
	enforce	ement o	of										L5
•	legislat	1011. the rol	o of in	format	ion too	hnolog	in on	ironm	mt and h	umon ha	alth		16
Pedagogy	tools: Ble	nded 1	earning	o Case	elet vi	ideo lec	ures s	lf-read	ling		ann.		LU
Course O	utcome	s s	curring	5, 0450	, 100, 11		.ures, 5	JII Touc					
eourse o									_				
1. To	impart	know	ledge	on na	itural	resour	ces ar	nd its a	associat	ed pro	blems.		
2. To	familia	rize le	earner	s abo	ut ecc	osvster	n. bio	livers	ity. and	their c	conserv	ration.	
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3. 10	introdu	ce lea	rners	about	t envi	ronme	nt pol	lution	•				
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6. Ka Pu	uushik A Iblishers I	and F Edition	Kaushil I-VI. 20	k C.P. 018.	Persp	pectives	in Er	vironn	nental St	udies. 1	New Ag	ge Interr	national
7. Da	ave D Kat	ewa S.	.S. Tex	tbook	ofEnv	ironme	ntal Stu	dies, 2 <sup>1</sup>	<sup>nd</sup> Edition	. Cenga	ige Learr	ning Indi	a. 2012.
Additional	Reading	r 9											
1. Be	enny Jose	ph. Te	extbook	c of Ei	ivironi	mental	Studies	3 <sup>rd</sup> ed	ition, Mo	Graw H	Hill Publ	lishing c	ompany
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4. Bo	otkin D.B	. Envir	onmen	tal Sci	ence: I	Earth as	a Livin	g Plane	et. John V	Viley an	d Sons. :	5 <sup>th</sup> editio	<u>n. 2005.</u>
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## MFST1001: Health & Wellbeing

L	Т	Р	S	J	С
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#### **Course Description**

The course provides the students a better understanding of the role of a proper diet in maintenance of human health. This course emphasizes the composition of the food, and will help to understand how to exercise, the role of sports and physical fitness in development of a good health. The course also focuses on the importance of emotional well-being and mindfulness. This course helps in teaching the role of yoga in maintenance of physical balance.

#### **Course Objectives**

- To provide an understanding of the relationship between food and nutrition
- To emphasize the role of exercise, sports and physical fitness in obtaining a good health
- To explain about the mindfulness and emotional well being
- To teach the role of yoga and meditation in maintaining the body balance

#### UNIT-I

Understand the relationship between Food and Nutrition and how food composition affects nutritional characteristics. Knowledge about regulatory principles in determining diets and recommended daily allowances. Understand how to create personalised diet/nutrition plans.

#### UNIT-II

Understand how exercise, activity and sports helps in developing good health. Experiential exposure to the role of proper, specific nutritional interventions along with structured activities on developing proper physical health. Practical exercises and assignments in sports and exercise regimes.

#### UNIT-III

Introduction to emotional wellbeing and mindfulness. Teaching of mindfulness practices to reduce stress, increase relaxation and improve mental wellbeing.

#### UNIT-IV

Introduction to Yoga theory and how Yoga helps in maintaining balance in the body. Practice of Yoga and meditation to improve overall emotional and physical balance. Practical yoga exercises and meditation techniques

#### **Course outcomes**

By the end of the course, student will

- Learn the role of nutrition and diet in maintaining a good health
- Will understand how the exercise, sports and physical activities will improve health
- Will learn mindfulness practices for reducing stress
- Will know the importance of yoga and meditation

## CLAD2001: Preparation for Campus Placement-1 (Soft Skills 5A)

L	Т	Р	S	J	С
0	0	2	0	0	1

#### **Course Description**

The course addresses all relevant areas related to campus placements and readies them to ace their upcoming/ ongoing recruitment drives. Specifically, it focuses on students' career preparedness, interview skills, test preparedness, etc.

#### **Course Objectives**

Prepare the students for their upcoming/ ongoing campus recruitment drives.

- Career Preparedness: Resume & Cover Letter Writing, Interview Skills: Elevator Pitch, Making the First Impression, Being Other-Oriented, Being Positive and Curious, communicating with Confidence and Poise, Frequently Asked Questions & How to Answer Them, Pitfalls to Avoid, Etc. Etiquette: Hygiene, Courtesy, Culture differences, Workplace, use of cell phone, Profanity, Slang, Protocol.
- Verbal Ability: Practising Reading Comprehension, Error Detection, Sentence Completion, MCQs, FIBs, Para jumbles, Cloze Test, Critical Reasoning.
- 3. Quantitative Aptitude: Number Systems, Algebra, Geometry, Data Handling, Data Sufficiency, Word Problems
- 4. Reasoning: Logical and Verbal Reasoning

#### **Course Outcomes**

- 1. Write a power resume and covering letter
- 2. Answer interview questions with confidence and poise
- 3. Exhibit appropriate social mannerisms in interviews
- 4. Solve placement test questions on verbal ability, quantitative aptitude and reasoning

#### References

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

# CLAD2011: Preparation for Higher Education (GRE/ GMAT)-1 (Soft Skills 5B)

	$\mathbf{L}$	Т	Р	S	J	С
Course Description	0	0	2	0	0	1

The course offers a special track for students who aspire to go abroad in pursuit of their higher education for which a GRE/ GMAT score is a prerequisite. It covers all four topical areas of these tests and includes fully solved mock tests as well.

#### **Course Objectives**

- 1. Prepare the students to solve questions from all four broad areas of GRE/ GMAT
- 2. Orient the students for GRE/ GMAT through mock tests

#### **Syllabus**

- 1. Verbal Reasoning: Reading Comprehension, Sentence Equivalence, Text Completion, Sentence Correction, Critical Reasoning
- 2. Quantitative Reasoning: Arithmetic, Algebra, Geometry, Data Analysis
- 3. Analytical Writing Assessment: Issue/ Argument
- 4. Integrated Reasoning

#### **Course Outcomes**

- 1. Solve questions from all four broad areas of GRE/ GMAT
- 2. Practice answering several mock tests

#### References

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

## CLAD2021: Preparation for CAT/ MAT - 1 (Soft Skills 5C)

	L		Т	Р	S	J	С
Course Description:	0	)	0	2	0	0	1

The course offers a special track for UG students who aspire to go for higher education in business management in India for which cracking CAT/ MAT/ other related test is mandatory. It covers all four topical areas of these tests and includes fully solved mock tests as well.

#### **Course Objectives:**

- 1. Prepare the students to solve questions from all four relevant areas of CAT/ XAT/ MAT, etc.
- 2. Orient the students for CAT/ XAT, etc. through mock tests

#### Syllabus

- 1. Quantitative Ability: Arithmetic, Algebra, Geometry, Mensuration, Calculus, Trigonometry
- 2. Data Interpretation: Data Interpretation and Data Sufficiency
- 3. Logical Reasoning: Data Management, Deductions, Verbal Reasoning and Non-Verbal Reasoning
- **4.** Verbal Ability: Critical Reasoning, Sentence Correction, Para Completion, Para Jumbles, Reading Comprehension

#### **Course Outcomes:**

- 1. Solve questions from all four relevant areas of CAT/ MAT as listed above
- 2. Practice test-cracking techniques through relevant mock tests

#### **References:**

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

## CLAD2031: Preparation for Campus Placement-2 (Soft Skills 6A)

	L	Т	Р	S	J	С
Course Description	0	0	2	0	0	1

This course builds on the previous course and focuses on all four major areas of campus placements, including career preparedness, mock interviews, verbal ability, quantitative aptitude and logical reasoning.

#### **Course Objectives**

- 1. To comprehensively prepare all eligible and aspiring students for landing their dream jobs.
- 2. To sharpen the test-taking skills in all four major areas of all campus drives
- 3. Career Preparedness II: Mock Interviews, Feedback and Placement Readiness
- **4.** Verbal Ability II: Practising Reading Comprehension, Error Detection, Sentence Completion, MCQs, FIBs, Para jumbles, Cloze Test, Critical Reasoning
- **5.** Quantitative Aptitude II: Number Systems, Algebra, Geometry, Data Handling, Data Sufficiency, Word Problems
- 6. Reasoning II: Logical and Verbal Reasoning

#### **Course Outcomes**

- 1. Demonstrate career preparedness and confidence in tackling campus interviews
- 2. Solve placement test questions of a higher difficulty level in verbal ability, quantitative aptitude and logical reasoning.
- 3. Practice test-taking skills by solving relevant questions accurately and within time.

#### References

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

# CLAD2041: Preparation for Higher Education (GRE/ GMAT)-2 (Soft Skills 6B)

	L	Т	Р	S	J	С
Course Description	0	0	2	0	0	1

1. The course offers a special track for students who aspire to go abroad in pursuit of their higher education for which a GRE/ GMAT score is a prerequisite. It covers all four topical areas of these tests at a higher difficulty-level and includes fully solved mock tests as well.

#### **Course Objectives**

- 1. Prepare the students to solve higher level questions from all four broad areas of GRE/ GMAT
- 2. Orient the students for GRE/ GMAT through mock tests

#### Syllabus

- 1. Verbal Reasoning II: Reading Comprehension, Sentence Equivalence, Text Completion, Sentence Correction, Critical Reasoning
- 2. Quantitative Reasoning II: Arithmetic, Algebra, Geometry, Data Analysis
- 3. Analytical Writing Assessment II: Issue/ Argument
- 4. Integrated Reasoning II

#### **Course Outcomes:**

- 1. Solve higher level questions from all four broad areas of GRE/ GMAT
- 2. Practice answering several mock tests

#### **References:**

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, CareerLauncher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

## CLAD2051: Preparation for CAT/ MAT - 2 (Soft Skills 6C)

	L	Т	Р	S	J	С
Course Description:	0	0	2	0	0	1

The course offers a special track for UG students who aspire to go for higher education in business management in India for which cracking CAT/ MAT/ other related test is mandatory. It covers all four topical areas of these tests at a higher level of difficulty and includes fully solved mock tests as well.

#### **Course Objectives:**

 Prepare the students to solve all types of questions from all four relevant areas of CAT/ XAT/ MAT, etc.

#### Syllabus

- 1. Quantitative Ability II: Arithmetic, Algebra, Geometry, Mensuration, Calculus, Trigonometry
- 2. Data Interpretation II: Data Interpretation and Data Sufficiency
- 3. Logical Reasoning II: Data Management, Deductions, Verbal Reasoning and Non-Verbal Reasoning
- 4. Verbal Ability II: Critical Reasoning, Sentence Correction, Para Completion, Para Jumbles, Reading Comprehension

#### **Course Outcomes:**

- 1. Solve higher difficulty level questions from all four relevant areas of CAT/ MAT as listed above
- 2. Practice test-cracking techniques through relevant mock tests

#### **References:**

- 1. Verbal Ability & Reading Comprehension by Arun Sharma and Meenakshi Upadhyay
- 2. Study material for CAT, SAT, GRE, GMAT by TIME, Career Launcher and IMS etc.
- 3. Quantitative Aptitude by R S Agarwal S Chand Publications
- 4. Quantitative Aptitude by Pearson Publications

## **FINA3001:** Personal Financial Planning

Course Description	L	Т	Р	S	J	С
Course Description	0	0	2	0	0	1*

Personal Financial Planning is one of the most significant factors in our lives. It is essential that funds are available as and when required at various stages of life. Unavailability of funds at critical stages of our life leads to financial distress and leads to many medical and non-medical problems. There are certain planned and unplanned events in our life. On the one hand, education of our children, their marriage, our retirement etc. are some of the planned events of our life, but at the same time, some medical urgency, accident or death of an earning member might be some unplanned events. Many of these events are beyond our control, but the availability of funds can be planned to avoid any financial distress. In other words, we cannot stop the rain but can plan for an umbrella.

This course looks at the many challenges an individual faces in a complex financial environment and the rising uncertainties of one's life. It focuses on achieving long-term financial comfort of individual and family through goal setting, developing financial and life strategies, acquiring personal financial planning knowledge and managing risk throughout one's life.

#### **Course Objectives:**

- 1. To build students' ability to plan for long-term financial comfort of individual and family through goal setting, developing financial and life strategies.
- 2. To provide students with knowledge on terms, techniques to evaluate investment avenues.
- 3. To build the skill set of the student to enable them to file their tax returns.

#### Syllabus

#### **Unit 1: Basics of Financial Planning**

Financial Planning Meaning, Need, Objectives, Financial Planning Process, Time Value of Money and its application using excel (NP)

#### Unit 2: Risk and Insurance Management

Need for insurance, Requirement of insurance interest, Role of insurance in personal finance, Steps in insurance planning, Life and Non-life insurance products, Life insurance needs analysis (NP)

#### **Unit 3: Investment Products and Measuring Investment Returns**

*Investment Products:* Small Saving Instruments, Fixed Income Instruments, Alternate Investments, Direct Equity

*Measuring Investment Returns:* Understanding Return and its concept, Compounding concept, Real vs Nominal Rate of Return, Tax Adjusted Return, Risk-Adjusted Return (NP)

#### **Unit 4: Retirement Planning**

Introduction to the retirement planning process, estimating retirement corpus, Determining the retirement corpus, Retirement Products (NP)

#### **Unit: 5 Tax Planning**

*Income Tax:* Income tax principles: Heads of Incomes, Exemptions and Deductions, Types of Assesses, Rates of Taxation, Obligations for Filing and Reporting, Tax aspects of Investment Products, Wealth Tax

#### **Course Outcome:**

- 1. Describe the financial planning process and application of time value of money
- 2. Application of life and non-life insurance products in financial planning
- 3. Understand the investment avenues and analysis of investment returns
- 4. Understand the retirement planning and its application
- 5. Describe and analysis the Tax Planning

#### **Text Books**

- 1. National Institute of Securities Management (NISM) Module 1 & XA
- 2. Madhu Sinha, Financial Planning, 2 Edition, McGraw Hill India
- 3. Simplified Financial Management by Vinay Bhagwat, The Times Group

#### **Reference Books**

- 1. Personal Financial Planning (Wealth Management) by S Murali and K R Subbakrishna, Himalaya Publishing House.
- 2. Mishra K.C., Doss S, (2009). Basics of Personal Financial Planning 1e. National Insurance Academy, New Delhi: Cengage Learning.
- 3. Risk Analysis, Insurance and Retirement Planning by Indian Institute of Banking and Finance.

CITA DA	IENT1001	<b>Business Economics</b>	L	Т	Р	S	J	C				
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	Alternate Exposure											

In today's competitive business environment, effective managerial/business decision making requires use of economic concepts and tools. Business efficiency depends on minimization of cost and maximization of production which requires perfect understanding of the economic concepts like demand, supply, production, cost and market conditions. Business economics uses economic concepts and principles by emphasizing on demand and Supply analysis, production & cost analysis and different market structures which are fundamental for further study. This course also introduces important macroeconomic concepts which are indispensable for understanding the functioning of an economy and which also affects the business performance.

#### **Course Objectives**

- Give outline on the fundamental concepts of business economics
- Choose the right demand forecasting technique based on the imparted knowledge about demand and supply concepts
- Specify the importance of cost and output relationships to take production decisions
- Analyse the market structures under different competitive conditions
- Apply relevant information for business decisions by gaining knowledge about various economic aspects.

Unit - I Introduction to Managerial Economics No of Hours: 8

Managerial Economics – Nature, scope, importance and application of Managerial Economics concepts in business decision making.

#### **Learning Outcomes:**

- After completion of this unit ,the student will be able to
- •Explain the concepts of Managerial Economics
- Describe the nature, scope and importance of Managerial Economics L1
- •Explain the application of managerial economics in business decision making

L1

L1

Pedagogy tools: Blended learning, Caselet, video lectures, self-reading

#### **UNIT-II Demand and Supply Analysis**

Demand and Supply Analysis: Determinants of demand, types of demand, Law of Demand, determinants of supply, law of supply, market equilibrium, price mechanism. Elasticity of demand, types of elasticity, methods to measure elasticity. Demand forecasting, Methods (Qualitative and Quantitative) of demand forecasting.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- Identify the determinants of demand and supply in economics L1
- Describe the process of price mechanism
- Calculate various types of demand elasticities L2
- Recognize methods of demand forecasting L2

Pedagogy tools: Blended learning, Caselet, video lectures, self-reading

#### **UNIT-III Production and Cost analysis**

Production and Cost Analysis: Production function, Laws of Production - Short run - one variable production function, Long run – Iso-quants, Iso-cost line, producer's equilibrium, expansion path, Law of returns to scale. Cost - Cost concepts, Cost output relation - short run cost output relationship, long run cost output relationship, Economies of scale and Dis Economies of Scale.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to L3

- Describe different types of production functions. L2
- Differentiate between various cost concepts L3
- Co-relate the relationship between production and cost analysis decisions L3
- List out various economies and diseconomies of scale L3

Pedagogy tools: Blended learning, Caselet, video lectures, self-reading

#### **UNIT-IV Market Structure**

Market Structure - Basis for classification of market power, kinds of competitive market, price and output decisions in perfect competition and imperfect market, Monopoly, Monopolistic, Oligopoly market . Market Failures - public goods, social goods, merit goods, administered prices (ceiling price and floor price) and Externalities - Positive and negative externalities.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- Compare various types of market structures L3
- Analyse the price and output decisions under perfect competitive conditions • L3
- Analyse the price and output decisions under imperfect competitive conditions L3
- Compare pricing decisions in the short run and long run L2 ۲
- List out various reasons for market Failure L1

Pedagogy tools: Blended learning, Caselet, video lectures, self-reading

#### No of Hours: 9

#### No of Hours: 9

L2

#### No of Hours: 10

#### **UNIT-V Macroeconomics No of Hours: 9**

Macroeconomics- National Income-Concepts of national income, methods of calculating national income. Inflation causes-demand pull and cost push inflation, measures to control inflation, business cycles -phases of business cycles and measures to control business cycles. Stabilization policies – Monetary Policy and Fiscal Policy.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- Describe various macroeconomic indicators L1
- Explain various methods of measuring national income L1
- Differentiate monetary and fiscal policy measures L2
- Explain stages of business cycles and its remedial measures L1
- Recognize types of inflation and its corrective measures L2

#### **Course Outcomes:**

- 1. Explain the concepts of Managerial Economics
- 2. Evaluate different methods of demand forecasting
- 3. Distinguish between various cost concepts
- 4. Evaluate various types of market structures
- 5. Explain various macroeconomic indicators

#### **Text Books:**

- Geetika, P.Ghosh, P.R.Choudhury, Managerial Economics, McGraw Hill Education PrivateLimited, New Delhi, 2018.
- Dominick Salvatore, Seventh Edition, Adapted Version, Oxford PublicationNew Delhi, 2014.

#### **Additional Reading :**

#### **Reference Books:**

1. Dr.D.N.Dwivedi, Managerial Economics, Vikas Publishing House, New Delhi, 2015/Latest Edition.

2. Paul G. Keat, Phili K. Y. Young, Sreejata Banerjee, "Managerial Economics", Pearson, New Delhi, 2012/Latest Edition.

#### Journals

1. Economic and Political Weekly, Sameeksha Trust, Mumbai

2. GITAM Journal of Management, GITAM Institute of Management, GITAM

University, Visakhapatnam3. Indian Journal of Economics, Academic Foundation, New Delhi

4. GITAM Journal of Management

5. E- Books and E-Journals

Website(s):

	Programme Objectives (POs)													PSOs			
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CO2	1	1	1	1	0								2	0	2		
CO3	0	0	0	2	2								2	2	2		
CO4	0	0	2	1	2								2	2	2		
CO5	1	0	0	1	2								2	0	2		

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	requisite(s)							
	Alternate Exposure							

Every manufacturing and trade business in an economy is intrinsically involved in financial transactions. These financial transactions serve as the foundation for the accounting system, which is just as critical as the technological or legal frameworks. Financial accounting knowledge enables managers to comprehend and evaluate financial reports, critical for making financial decisions and resolving problems. A manager should be capable of understanding the accounting structure to operate the organisation properly.

#### **Course Objectives**

- 1. To know the basics of the accounting and preparation process of Journals and Ledgers.
- 2. To understand the Prepare Trial Balance with adjustment.
- 3. To know the accounting framework to prepare Final Accounts of trading concerns.
- 4. To analyse and interpret the accounting information of financial statements for decision making.
- 5. To prepare financial statements

#### UNIT – I **Introduction of Accounting**

#### No of Hours: 10

Introduction to Accounting: Introduction, need, and definition of Accounting. Importance of Accounting, users of Financial Accounting records, Accounting concepts and conventions -Accounting Equation – Basics of IFRS.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- distinguish the book-keeping and double entry system L1 тo
- understand the accounting concents and conventions •

• know the basics of IFRS

#### Pedagogy tools: Blended learning, video lectures, self-reading and Coursera

#### UNIT – II Journal and Ledgers No of Hours: 12 Preparation of Journal and Ledgers – Types of Subsidiary books – Preparation of Triple Column Cash Book. Trial balance: Definition – Importance and methods of preparation. (NP) Learning Outcomes

After completion of this unit, the student will be able to

• prepare journals and ledgers L3 • know the different types of subsidiary books L1 • prepare trial balance from the ledger balances L3

Pedagogy tools: Blended learning, video lectures, self-reading

#### UNIT – III **Preparation of Financial Statements** No of Hours: 13

Preparation of Final Accounts: Objective and need for preparation of Income Statements - Form and contents of income statements. Preparation of Trading Account, Profit and Loss Account with adjustments. Preparation of Balance Sheet - Objectives and need for balance sheet - Form and contents of balance sheet. Preparation of balance sheet with Adjusting Closing Entries relating to Depreciation on Fixed Assets (Straight Line Method and Written down Value Method), outstanding expenses, prepaid expenses, Income received in advance, Accrued income, debtors, creditors and closing stock. (NP)

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	understand the form and contents of income statement	L1
•	prepare trading, and profit and loss account (income statement)	L3
•	make balance sheet by using adjustments (position statement)	L3

• make balance sheet by using adjustments (position statement)

Pedagogy tools: Blended learning, video lectures, self-reading, Coursera

UNIT – IV **Financial Statement Analysis** No of Hours: 15 Financial Statement Analysis: Funds flow analysis - Statement of funds from operations - Preparation of Funds flow statement. Cash flow analysis: Statement of cash from operations - Preparation of Cash Flow Statements (NP)

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	prepare and analyse the funds flow statement	L3
•	understand the cash from operations	L2
•	Analyse cash flow statement and know its uses	L5

Pedagogy tools: Blended learning, video lectures, self-reading

#### UNIT - V**Ratio Analysis**

Ratio Analysis: Meaning and types of ratios: Return on Capital Employed; Gross and Net Profit Margins; Asset Turnover; Trade Receivables Collection Period and Trade Payables Payment Period; Current and Quick Ratios; Inventory Turnover; Capital Gearing Ratio. (NP)

No of Hours: 10

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- know the different types of ratios L1
- analyse and interpret the financial statements with ratio analysis L5

Pedagogy tools: Blended learning, video lectures, self-reading

#### Textbook(s):

- 1. S.N. Maheshwari, S.K. Maheshwari and CA S.K. Maheshwari (2016). Accounting for Management. Vikas Publishing House, 3<sup>rd</sup> Ed. Noida.
- 2. S.P. Jain & Narang, "Financial Accounting I, Kalyani Publishers, 2010.

#### **Course Outcomes**

- 1. Differentiate the book-keeping and double entry system
- 2. Prepare trial balance from the ledger balances
- 3. Prepare balance sheets
- 4. Analyse cash flow statement and know its uses
- 5. Analyse and interpret the financial statements with ratio analysis

#### **Additional Reading**

#### **Reference Book(s):**

- 1. Ambrish Gupta (2016). Financial Accounting for Management: An Analytical Perspective. Pearson Education, 5<sup>th</sup> Ed. New Delhi.
- 2. Paul M. Collier (2015). Accounting for Managers: Interpreting Accounting Information for Decision Making. Wiley Publishers, UK.

#### Journal(s):

- 1. Management Accounting Research, ISSN: 1044-5005
- 2. The Management Accountant Journal, ISSN: 09723528

Websites

1. htps://www.icai.org/

	Programme Objectives (POs)												]	PSOs		
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										0	1	2				
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CO2	1	2	0	1	0								0	0	0	
CO3	2	2	3	2	1								2	2	2	
CO4	3	2	2	1	1								2	2	2	
CO5	3	2	2	1	1								2	2	2	

1-Low, 2- Medium and 3- High Correlation

	Course Code	Course Title	L	T	Р	S	J	C
GT TA I		Indian Business Environment	3					3
TO BE UNITED	Course Owner	Dept.of Entrepreneurship	Syl ver	1	.0			
	Course Pre- requisite(s)	Business Economics	Contact hours			rs	4	5
	Course Co-requisite(s)	NA	Date Approved					
	Alternate Exposure	NA						

Every business operates in a particular environment, and each business unit has its environment. A change in environment presents an opportunity to some and a threat to others. Sometimes, in the same industry, a relevant change in environment can have a favorable or the opposite impact on different units of the same industry. The business environment in India is undergoing a dynamic change; Now, India is regarded as a potential economic power and emerged as one of the world's emerging nations. India's business world occupies a place in almost all major sectors of the world economy. The main drive of this course addresses structural changes, external environmental changes, planning and policies of the state, economic trends, information technology, and its impact.

#### **Course Objectives:**

This course intends the students to

- To understand different Business Environmental concepts and their scope
- To Know the different Industrial Policies and its impact on Indian Business Environment
- To Analyze the monetary and fiscal policies in India and its impact on business.
- To know the regulatory and actions of corporate governance

#### **Unit I: Business Environment**

Nature, scope, and objectives of Business-Environment of business description-internal environment and external environment- Political environment- Economic environment- Social Environment- Technological environment- Ecological & Legal environment- Macro environment and Microenvironment.

#### Learning outcomes:

<i>After completion of this unit, the student will be able to</i>	
• Describe the internal and external environment of a business	L2
• Explain political, economic, social, and technological environments in India	L1
• Recognise the legal aspects of the business environment in India.	L2
• Distinguish between micro and macro environmental factors	L4

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

#### **Unit II: Economic Planning and Industrial Policy**

Economic Planning impact on business environment- Meaning and Objectives of Industrial Policies -Need for Industrial Policies- Salient features of 1948, 1956, 1991 Industrial Policies- Closed economy and open economy- Liberalization, Privatization and Globalization-NITI AAYOG and its objectives- Ease of doing business- FERA- FEMA- Competition Act.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

#### No of Hours - 9

No of Hours-9

TO

•	Describe salient features of various industrial polices in India	L1
•	Describe the FERA and FEMA acts in role of ease of doing Business	L2
•	Analyze the Globalization impact on Indian Business Environment	L4

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

#### Unit III: Monetary and Fiscal Policy

Monetary Policy and its objectives - CRR and SLR-Money Supply- instruments of money supply- RBI's Monetary Policy Measures- Fiscal Policy and its Objectives-Techniques of Fiscal Policy- Impact of Monitory and Fiscal Policy on business environment- Central and States Budget- finances of the central and state budgets.

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	Recognize the objectives of Monetary and fiscal policies in India	L1
•	Discuss the impact of monetary and fiscal policies on Business	L2

• Illustrate the different components in central and state budgets L3

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

#### Unit IV: Business and Social Environment No of Hours- 9

Business and Society- objectives and importance of Business-Professionalization of Business- Ethics in Business-Impact of cultural factors in business- Social Responsibility of Business-giving back to the Society-Social involvement, social Audit-Companies Act 2013 and CSR.

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	Discuss the relationship between Business and Society	L1
•	Explain the importance of ethics in business	L2
٠	Analyze the Social responsibility of business in various aspects	L3
٠	Assess the social audit under the companies Act relates to CSR	L5

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

#### **Unit V: Corporate Governance**

#### No of Hours-9

No of Hours-9

Description of Corporate Governance-reasons for the growing demand for corporate governanceimportance of corporate governance- prerequisites; regulatory and voluntary actions; recommendations of Birla Committee; legal environment of corporate governance in India.

#### Learning Outcomes:

 After completion of this unit, the student will be able to
 Image: L1

 • Describe the importance of corporate governance
 Image: L1

 • Discuss and analyze the need of corporate governance in India
 Image: L4

 Describe and criticize recommendations of Birla Committee
 Image: L5

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

#### **Course Outcomes**

- 1. Distinguish between micro and macro environmental factors
- 2. Analyze the Globalization impact on Indian Business Environment
- 3. Recognize the objectives of Monetary and fiscal policies in India
- 4. Assess the social audit under the companies Act relates to CSR
- 5. Discuss and analyze the need of corporate governance in India

#### **Text Book:**

1. Paul, Justin, Business Environment Text and Cases, Tata Mc Graw Hill, New Delhi

#### **References:**

- 2. Cherunilam, Francis, "Business Environment, Text &Cases", Himalaya Publishing House, New Delhi,2019
- 3. Aswathappa, K, "Essentials of Business Environment", Himalaya Publishing House, New Delhi.
- 4. Dutt, Ruddra and Sundaram, K.P.M., "Indian Economy", S. Chand& Co. Ltd., NewDelhi.
- 5. Misra and Puri, Indian Economy, Himalaya Publishing House. NewDelhi : 2019
- 6. Joshi& Kapoor, Business Environment, Kalyani Publishers, NewDelhi, 2019
- 7. Worthing ton, Ian and Britton, Chris,"The Business Environment", Pearson Education Ltd, New Delhi, 2019
- 8. Fernando, A.C., Indian Economy, Pearson Education Ltd, New Delhi, 2019.

#### **Other Readings:**

- 1. Harvard Business Review
- 2. The Mint/ The Economic Times/Business Standard/Business Line Daily News Papers

	Programme Objectives (POs)											PSOs			
	1	1 2 3 4 5 6 7 8 9 1 1 1								1	2	3			
										0	1	2			
CO1	3	1	0	0	0								0	0	0
CO2	1	2	1	3	0								0	0	0
CO3	0	2	1	3	2								1	1	1
CO4	0	2	2	2	2								2	2	2

1-Low, 2- Medium and 3- High Correlation

	HRMG1001	Principles and Practice of	L	Т	Р	S	J	С
G SERVE 1		Management						
1 0 11			3					3
	Course	Department of Human Resource	Sy	llab	us		1.	0
O BE UNITE	Owner	Management	ve	rsior	1			
	Course	NA	Co	ontac	urs	46		
	Pre-requisite							
	(s)							
	Course	NA	Da	ate				
	Co-		Ap	opro	ved			
	requisite(s)							
	Alternate							
	Exposure							

One of the most important human activities is managing. Management can be traced back to ancient times whenever there was large-scale endeavor like great pyramids in Egypt, the Great Wall of China, Taj Mahal in India. All these required many people working in groups in a better-coordinated way to achieve a well-defined target over some time. In the present context, of globalization, because of the increasing role of large and complex organizations in the development of the economy, the concept of Management has become very significant for managing the business efficiently.

#### **Course Objectives**

- 1. To understand theoretical aspects, processes and principles, the scope of Management and its application to modern management practice.
- 2. To analyze how the field of Management has evolved and its significant contributions
- 3. To analyze and apply the critical role of managers in modern organizational settings
- 4. To illustrate and evaluate the importance of planning, organizing, directing and controlling in decision making

#### Unit I Management Nature and Concept

#### No of Hours - 09

Nature, Concept, Scope and Significance; Functions; Management: Art or Science or Profession; Organization vs Administration vs Management, Schools of Management: Contributions of F.W. Taylor, Henry Fayol, Elton Mayo; Roles of Managers; Social Responsibility and Business Ethics.

#### Learning Outcomes

After completion of this unit, the student will be able to	
<ul> <li>understand the nature and scope of Management</li> </ul>	L2
<ul> <li>know the differences between Management and Administration</li> </ul>	L4
<ul> <li>describe different contributions of Management through</li> </ul>	L2
<ul> <li>summarize the Management and its functions</li> </ul>	L2
• can apply different managerial roles in Business organization	L3

Pedagogy Tools: Case study, Lecture cum Discussion, Self-reading, Polls

#### Unit II Planning

#### No of Hours-09

Concept, Objectives, Types, Steps and Techniques; Making Planning Effective; Decision Making: Steps in Decision Making and Types; Management by Objectives (MBO).

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

understand the concept and objectives of Planning
 L2

- apply the Decision-making process in Business organizations L2
- explain the importance of MBO in organization

Pedagogy Tools: Case study, Lecture cum Discussion, Polls, Student Presentations

#### Unit III Organizing

No of Hours – 10

Structure, Nature, Types of Organizations, Principles of Organizing; Departmentalization; Delegation; Decentralization of Authority; Span of Control - Line and Staff Functions; Staffing: Concept, Significance and Functions.

#### Learning Outcomes:

After completion of this unit, the student will be able to

- aware the concept and principles of Organizing L2 • understand different Organizational structures L2 • explain the difference between Centralization and Decentralization L2 L5
- differentiate the functions of Line and Staff

**Pedagogy Tools:** Case study, Lecture cum Discussion, quiz, Student Presentations

#### Leading Unit IV

No of Hours – 09

Introduction, Characteristics of a Leader, Functions of a Leader; Leadership and Management; Principles of Leadership, Styles of Leaders.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

• know the concept and characteristics of leadership L2 • understand the different functions of leadership L2 • explain the distinguish between leadership and Management L4 • analyze and apply different leadership styles L4

Pedagogy Tools: Case study, Lecture cum Discussion, Self-reading, quiz, Student Presentations

#### Unit V Controlling No of Hours - 09

Introduction, Concept of Controlling, Purpose of Controlling; Types of Control; Steps in Controlling; Techniques in Controlling.

### Learning Outcomes:

After completion of this unit, the student will be able to

•	understand the concept and purpose of Controlling in Organizations	L2
•	analyze different types of controls	L4
•	explain different steps in controlling process	L2
•	apply different controlling techniques in different situations	L3

Pedagogy Tools: Case study, Lecture cum Discussion, quiz, Student Presentations

### Case Let (Not Exceeding 200 Words)

#### **Course Outcomes**

- 1. can apply different managerial roles in Business organization
- 2. explain the importance of MBO in organization
- 3. aware the concept and principles of Organizing
- 4. analyze and apply different leadership styles
- 5. understand the concept and purpose of Controlling in Organizations

#### **Textbooks:**

Harold Koontz & Heinz Weirich (2012), Management, a Global and Entrepreneurial Perspective, New Delhi: Tata McGraw Hill Publishing company.

#### **Additional Readings:**

- 1. Vikalpa, Indian Institute of Management
- 2. Journal of General Management., Mercury House Business Publications, Limited
- 3. Harvard Business Review, Harvard Business School Publishing Co. USA
- 4. Indian Management, AIMA, New Delhi
- 5. IJBMT Global Business Innovation, SPIRI
- 6. GITAM Journal of Management, GIM, GITAM (Deemed to be University

#### **References:**

- 1. Dipak Kumar Bhattacharyya (2012), Principles of Management: Text and Cases, New Delhi: Pearson Publications.
- 2. Balasubramanian. N. (2012), Management Perspectives, New Delhi: MacMillan India Ltd.
- 3. Charles Hill, Steven Mc Shane (2012), Principles of Management, New Delhi: Tata Mac Graw Hill
- 4. Ricky W. Griffin (2012), Management, New Delhi: Cengage Learning.
- 5. Terry and Franklin (2011), Principles of Management. New Delhi: AITBS Publishers.
- 6. Robert Kreitner (2012), Principles of Management. New Delhi: Cengage, South-Western12 E.

	Programme Objectives (POs)													PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1	3	2	0	0	0								0	0	0	
CO2	2	2	2	3	0								0	0	0	
CO3	1	2	2	3	2								1	1	1	
CO4	0	2	3	2	2								2	2	2	

1-Low, 2- Medium and 3- High Correlation

#### LANG1081: SPECIAL ENGLISH

### L T P S J C 3 0 0 0 0 3

#### **COURSE OBJECTIVES**

- Understand and appreciate different literary genres.
- Recognize and analyse the main elements of different literary genres particularly short stories, essays, and poetry.
- Demonstrate in written and oral form both the comprehension and the analysis of literary texts (poetry,prose,short stories and essays)
- Appreciate and apply stylistic differences while communicating in a contemporary context for different purposes
- Create reasonably professional scripts with correct and varied usage of grammatical structures and punctuation for accurate communication of ideas

#### **LEARNING OUTCOMES**

#### Upon successful completion of Unit 1, the student will be able to:

- 1. Demonstrate an understanding of poetry as a literary genre (L2)
- 2. Identify and describe poetic forms and poetic devices (L2,L3)
- 3. Analyze and effectively communicate ideas related to the poetic works for their structure and meaning, using correct terminology. (L3,L4)

#### UNIT -I

**Poetry** 

- 1. The Road Not Taken by Robert Frost
- 2. The Walrus and the Carpenter by Lewis Carroll
- 3. Captain! My Captain! by Walt Whitman
- 4. Sonnet 'No-60'-William Shakespeare
- 5. "The Sun Rising" by John Donne

#### LEARNING OUTCOMES

#### Upon successful completion of Unit II, the student will be able to:

- Demonstrate an understanding of short story as a literary genre (L2)
- Identify and describe distinct literary characteristics of the short story form (L2,L3)
- Analyze and effectively communicate ideas related to the short stories for their structure and meaning. (L3,L4)

#### UNIT-II

Short Stories

- 1. My Financial Career -<u>Stephen Leacock</u>
- 2. A Story from Confucius- Confucius
- 3. The Barber's Trade Union-Mulk Raj Anand
- 4. <u>An Occurrence at Owl Creek Bridge by Ambrose Bierce</u>
- 5. The Story of an Hour by Kate Chopin

#### **LEARNING OUTCOMES**

#### Upon successful completion of Unit III, the student will be able to:

- Read essays, and opinions while analyzing the structural and sentence level arrangement of the writing.(L1)
- Examine effective unity, support, coherence, and mechanics in essays.(L4)
- Write essays considered appropriate for the undergraduate level (L5)

### UNIT-III

#### Essays

- 1. "A Hanging" George Orwell
- 2. <u>"Self-Reliance</u>"-Ralph Waldo Emerson
- 3. "Attitude"- Margaret Atwood
- 4. "The Responsibility of Intellectuals"- Noam Chomsky
- 5. <u>"Letter To His 10-Year-Old Daughter</u>- Richard Dawkins

### **LEARNING OUTCOMES**

#### Upon successful completion of Unit IV, the student will be able to:

- Engage with relevant scholarly works on contemporary issues (L1)
- Able to analyze, describe, and debate the complexities of globalization(L3)
- Situate one's own reading in terms of society, religion, caste, region, gender, and politics(L4)

### UNIT-IV:

#### Contemporary Issues

- 1. "The Globalisation of Inequality"- P. Sainath
- 2. "Words from an Open Mind to a Closed or Sealed One"- Ramachandra Guha
- 3. "The idea of India" Aruna Roy
  - 4. "Why not a separate UN Charter on Casteism?"- K. Balagopal
  - 5. "The root cause of corruption" Tabish Khair

## **LEARNING OUTCOMES**

### Upon successful completion of Unit V, the student will be able to:

- Use prewriting techniques to develop ideas in paragraphs and essays.(L2)
- Practice unity, coherence (including transitions), and appropriate writing style.(L2)
- Recognize and incorporate proper grammar and mechanics including parts of speech, verb tense, subject-verb agreement, word choice, spelling, commas, and other punctuation.(LI)
- Write a book/film review(L3)

### UNIT-V:

Coursera Courses:

- Advanced Grammar & Punctuation Project (UCI Division of Continuing Education) 20 hours
- Advanced Writing (UCI Division of Continuing Education) 26 hours

#### Book/Film Review

#### **COURSE OUTCOMES**

- 1. Recognize and incorporate proper grammar and other mechanics of language in one's communication acts.(L1, L3)
- 2. Demonstrate an understanding of the distinct literary characteristics of poetry, short story and essay as literary genres (L2)
- 3. Analyze and effectively communicate ideas related to the prescribed literary genres for their structure and meaning, using correct terminology. (L3,L4)
- 4. Write paragraphs, essays and reviews with the complexity considered appropriate for the undergraduate level (L3,L5)
- 5. Analyze, describe, and debate the complexities of globalization, situating own reading in terms of society, religion, caste, region, gender, and politics (L3, L4)

\*\*\*\*\*\*

#### LANG1091: HINDI

L	Т	Р	S	J	С
3	0	0	0	0	3

#### **INTRODUCTION**

This course contains a rich selection from Hindi poetry and prose. Grammar and translations from official language are also included.

- चंद्रधरशर्मागुलेरी

- भीष्म साहनी

- अज्ञेय

#### **COURSE OBJECTIVES**

- 1) To enlighten students about the richness and value of the national language
- 2) To offer working knowledge of Hindi to the students.

#### **SYLLABUS**

गद्यविभाग(Prose Detailed Text) 1.बाजारदर्शन <sup>,</sup> 2. ईर्ष्या, तूनगईमेरेमनसे 3.आपनेमेरीरचनापढ़ी? 4. भारतीयसाहित्यकीएकता 5. अतिथि 6. मेरीरुमालखोगई	- श्रीजैनेंद्रकुमार - रामधारीसिंह 'दिनकर - हज़ारीप्रसादद्विवेदी - नन्ददुलारेवाजपेयी - रामविलासशर्मा - विद्यानिवासमिश्र
7. कविऔरकविता	- आचार्यमहावीरप्रसादद्विवेदी
8. सोनाहिरनी 9. <i>कफ़न</i>	- महादेवीवर्मा - मुंशीप्रेमचन्द
उपवाचकविभाग(Non Detailed Text)	
1. पुरस्कार	- जयशंकरप्रसाद
2. हार	- मन्नूभंडारी
3. सदाचारकातावीज	- हरिशंकरपरसाई
4. आदमीकाबच्चा	- यशपाल
5. हारकीजीत	- <u>सुदर्शन</u>
<ol> <li>ठाकुरकाकुआं</li> </ol>	- मुंशीप्रेमचन्द

- 6. ठाकुरकाकुआं
- 7. उसनेकहाँथा
- 8. रोज
- 9. चीफकीदावत

## व्याकरणविभाग

$\cap r \rightarrow$	<u> </u>	C	$\sim$
ा निदशकअनसारव	वियाकाब	दलकरा	लाखए
			<b>, , , , , , , , , , , , , , , , , , , </b>
(Rewriting of sente	ences as o	directed	

- 1. कारक (case)
- 2. लिंग (gender)
- 3. वचन (number)
- 4. वाच्य (voice)

II. शुद्धकीजिए (correction of sentences)1. चाहिएप्रयोग

- 2. लिंगऔरवचनसंबंधी
- III. वाक्यप्रयोग (make your own sentences)
- IV. कार्यालयहिंदी: प्रशासनिक
  - शब्दबली / परनाम (karyalay Hindi : Administrative terminology)
  - 1. कार्यालयो केनाम
  - 2. पदनाम
- V. संधिविच्छेद
- VI. विलोमशब्द
- VII. पत्रलेखन
- VII. गंधाशकेआधारपरदिएगयेप्रशनोकाउत्तरदेनाचाहिए
- VII. निबंध

## **COURSE OUTCOMES**

- 1) The student learns reading and writing Hindi
- 2) Understands and learns proper use of Grammar
- 3) Develops communication Skills.

### TEXT BOOK

- 1. Prose Text: Dr. Ajaya Kumar Patnaik, **Gadya Gaurav**, Sonam Prakashan, Badamdadi, Cuttak.
- 2. Non, Detailed Text: Dr. Gulam Moinuddin Khan, **Charchit Kahaniyan**, Shabnam Pustak Mahal, Badamdadi, Cuttak.Text: Dr.T.Nirmala & Dr. S. Mohan, Padya Manjari, Rajkamal Prakashan, New Delhi.\* Latest Editions

#### **INTRODUCTION**

This course contains a rich selection from Sanskrit language and literature.

#### **COURSE OBJECTIVES**

- 1) To enlighten students about the richness and value of the classical language
- 2) To offer working knowledge of Sanskrit to the students.

#### SYLLABUS

<u>POETRY</u> :	Lesson No. 1	Saranagathi From Valmiki Ramayanam Yuddhakanda 17 <sup>th</sup> Canto Slokas 11 – 68
	Lesson No. 2	Ahimsa Paramodharmah From Srimadbharatam, Adiparva 8 <sup>th</sup> chapter Sloka 10 – to the end of 11 Chapter
	Lesson No. 3	Raghoh Audaryam From Raghuvamsa 5 <sup>th</sup> Canto 1 – 35 Slokas
PROSE :	Lesson No. 4	Mitrasampraptih From Pancatantra – Ist Story (Abridged)
	Lesson No. 5	Modern prose Chikroda katha Andhra Kavya Kathah By Sannidhanam Suryanarayana Sastry
	Lesson No. 6	Computer Yanthram By Prof. K.V. Ramakrishnamacharyulu

#### GRAMMAR

#### **DECLENSIONS:**

Nouns ending in Vowels:

Deva, Kavi, Bhanu Dhatr, Pitr, Go, Rama, Mati, Nadee, Tanu, Vadhoo, Matr, Phala, Vari & Madhu

SANDH	I:

Swara Sandhi	:	Savarnadeergha, Ayavayava, Guna, Vrddhi, Yanadesa
Vyanjana Sandhi	:	Scutva, Stutva, Anunasikadvitva, Anunasika, Latva, Jastva
Visarga Sandhi	:	Visarga Utva Sandhi, Visargalopa Sandhi, Visarga Repha Sandhi, Ooshma Sandhi

#### SAMASA :

- Dwandwa (1)
- (2a) Karmadharaya
- Paradi Tatpurusha (2c)
- (2e) Upapada Tatpurusha
- (4)

- Tatpurusha (Common) (2)
- (2b) Dwigu
- Gatitatpurusha (2d)
- Bahuvrihi (3)
- Avyayibhava

#### **CONJUGATONS**

Ist Conjugations - Bhoo, Gam, Shtha, Drhs Labh, Mud, IInd Conjugation – As ( ) IIIrd Conjugation – Yudh, IV th Conjugation – Ish VIII Conjugation – Likh, Kri ( ) IXth Conjugation – Kreen ( ) Xth Conjugation - Kath, Bhash, Ram, Vand,

#### **COURSE OUTCOMES**

- 1) The student learns reading and writing Sanskrit
- 2) Understands and learns proper use of Grammar
- 3) Develops communication Skills.

### LANG1111: TELUGU

$\mathbf{L}$	Т	Р	S	J	С
3	0	0	0	0	3

#### **INTRODUCTION**

This course contains a rich selection from Telugu language and literature.

#### **COURSE OBJECTIVES**

- 3) To enlighten students about the richness and value of the regional language4) To offer working knowledge of Telugu to the students.

### **SYLLABUS**

ప్రాచీనకవిత్వం:	
1. నన్నయ	- గవంగాశవంతనులకథ
	ఆవంద్రమహాభారతవం- ఆదిపర్వం- నాలనఆశ్్సవం(120-
	165) "నిరినిరుడిగిశివరితమనకరి" పరిడి ''దివ్యభూషణాలవంకృత '' వరకు
2. తిక్కన	- మూషికమార్జాలవృత్తవంతవం
e	ఆవం(దమహాభారతవం- శ్వంతిపర్వం - డవఆశ్్సవం(202 - 242)
<b>思</b> て	ತವಲನ ಕಮಳ್ಳಿ ನುವರಡನ ಭ್ಯಾಮು ಬವರದನ.
3. అల్లసానిపెద్దన	- హవంసీచ్రకవాకసవంవాదవం
	చునుచరిత్రము- ఆరవఆశ్్సవం(62-68) ''గవంగాతరవంగిణి''
	నువండి''జవంభారిభిదురసవంరపంభవంబు'' వరకు
4. తరిగవండవవంగమావంబ	- ఎఱుకతశ్రీవవంకటాచలమాహాత్మంఆశ్్సవం(4-51)
	''వకుళనునేనావివాహ[పయత్న వంబు'' వండి''అనియిట్్ల''
	వరకు ఆధునికకవిత్వం
5. గరిమెళుసత్వనార్యణ	- మాకోద్్దతెలదొరతనము
6. <u>శ్రీశ్రీ</u>	- మహాపసాధానవం
7. జాషువ	- ముసాపరులు
8. పుట్టపరొతనార్యణాచారు్య	పలు - మేఘదూతముకథానికలు
9. పాలగుమ్్మపద్మర్జు	- గాలివాన
10. కొలకటూరిఇనాక్	- ෂර්ව
11. కేతువిశ్నాథరెడిడి	- నమ్మకున్న నేల
12. పాట్లపలిలర్మార్పు	- జైలువ్యకరణవం
13. సవంధులు	- సవర్ణ(ద్జ, గుణ, యణాదేశ, వృదిధి, త్రిక, గ, స, డ, దవాదేశ,
	రుగాగమ, ట్గాగమ, ఆమ్రేడిత, ఆత్సవంధిమొదలైనవి.
14. సమాసాలు	- తతుపురుష, కర్మధారయ, ద్వంధ్, దొగు, బహువ్రీహీ.
	మొదలైనవి

#### **COURSE OUTCOMES**

- 1) The student learns reading and writing Telugu
- 2) Understands and learns proper use of Grammar
- 3) Develops communication Skills.

	HRMG1021	Human Resource Management	L	Т	Р	S	J	С
G + SERVE 14			3	0	0	0	0	3
the second second	Course Owner	Dept. of HRM	Syllabus version			sion	1.0	
TO BE UNWER	Course Pre- requisite(s)		Co	ntact	hou	rs	45	
	Course Co-requisite(s)	NIL	Da	te Aj	oprov	ved		
	Alternate Exposure							

Success in today's competitive business environment is increasingly a function of effective management of its resources, particularly human resources, which are the most valuable assets of an organization. The efficiency and quality of service of an organization depend on its employee's enthusiasm and satisfaction with their jobs, which are directly related to their sense of being treated fairly. To become a successful manager, it is imperative to understand human sensitivities and factors that motivate individuals. Human Resource Management course provides the basic tools required as an HR professional in an organization.

#### **Course Objectives:**

On successful completion of this course, students will be able to:

- To Understand the fundamentals, evolution, function & challenges of HRM
- To Explore the role of HRM in procurement, development of human resources
- To Analyze the basic factors in designing the compensation and collective bargaining
- To Evaluate safety and health and establish effective separation practices.

#### UNIT –I Introduction

#### No of Hours 10

Introduction: Nature, scope and significance of HRM - Evolution of HRM - Recent trends in HRM - Functions of HRM - Challenges of HR managers.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	Understanding the concept of HRM and its importance.	L1
•	Describe the HR challenges and Skills	L2
•	Understanding alternative approaches to managing human resources and	L5
	appreciating the diversity of factors that motivate workers.	

**Pedagogy tools:** Blended learning, Case let video lectures, self-reading, corporate reports, and online tools for proper engagement. (Menti Meter, Kahoot)

#### UNIT –II Procurement

#### No of Hours 10

Procurement: Human Resource Planning – HR Forecasting methods - Job analysis and Job design – Recruitment - Selection – Induction.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- Describe the process of workflow analysis and identify why it is essential L2 to HRM.
- Briefly discuss the significant challenges and constraints involved in the L3 recruiting process.
- Understands various steps in the selection process and why it is so essential L1

#### to the organization.

**Pedagogy Tools**: Case let, video lectures, self-reading, TED talks, Online dashboards for recruitment and selection, Guest lectures.

#### UNIT –III Development

Development: Identification of training needs - designing the training program – Methods of training – Difference between Training & Development.

#### Learning Outcomes:

After completion of this unit, the student will be able to

- Understand the concepts of Training and Development
- Describe the concepts of gamification, digital learning, and micro-learning L5 and why they have become more critical in today's organizations.
- Identify the difference between Training and Development.
- Identify some of the methods of training and development.

**Pedagogy Tools:** Case let, video lectures, self-reading, Online survey and assessment, HR executive Interviews.

#### UNIT –IV Compensation and Integration

Compensation and Integration: Introduction - Basic factors in determining pay rates – Basic, Supplementary and Executive Remuneration – types of employee benefits and services - Quality of work-life – Collective Bargaining.

#### Learning Outcomes:

After completion of this unit, the student will be able to

- List various factors determining pay rates. L1
- Understand the concept of executive remuneration and QWL
- Understands the difference between primary and supplementary L2 compensation
- Understands how Employee Benefits helps for organization effectiveness L4

**Pedagogy tools**: Case let, video lectures, self-reading, Minor survey and report writing, Report analysis and Trend analysis on compensation, Industrial visit to know about the QWL standards

#### UNIT – V Separation and Maintaining No of Hours 10

Separation and Maintaining: Communication and Counseling - Safety and Health – Internal mobility - Retirement and Retirement benefits.

#### Learning Outcomes:

After completion of this unit, the student will be able to

- Analyze the role of the supervisor in employee safety and minimize accidents L4 at the workplace.
- Discuss the various provisions to prevent accidents in the workplace L3
- Describe the concept of internal mobility procedure in the company L2

**Pedagogy tools:** Case let, video lectures, self-reading, Roleplays, Group discussions, Discussions with Union/Welfare officer for industry exposure.

### **COURSE OUTCOMES**

- 1. Understanding the concept of HRM and its importance.
- 2. Describe the process of workflow analysis and identify why it is essential to HRM.
- 3. Understand the concepts of Training and Development
- 4. List various factors determining pay rates.

#### No of Hours 10

L1

L2

#### No of Hours 10

L1

5. Analyze the role of the supervisor in employee safety and minimize accidents at the workplace.

#### Textbook(s):

- Gary Dessler & Biju Varkkey, "Human Resource Management," Pearson, New Delhi, 16th edition.
- George W Bohlander, Scott A Snell, "Principles of Human Resource Management," Cengage • Learning, 2017.16th edition.
- Aswathappa, K., Human Resource and Personnel Management: Text & Cases, TMGH •
- Subba Rao, P., Personnel and Human Resource Management (Text & Cases), Himalaya •

#### **Additional Reading**

#### **Reference Book(s):**

- Edwin B Flippo, "Personnel Management," Tata McGraw Hill Publishing, New Delhi, 1984
- John H. Bernardin, "Human Resource Management An Experiential Approach," Tata McGraw • Hill, New Delhi, 2013
- Mirza, Saiyadain, "Human Resource Management," Tata McGraw Hill, New Delhi, 2013 •
- Gary Dessler & Biju Varkkey, "Human Resource Management," Pearson, New Delhi, 2015 14th • edition.

#### Journal(s)

- Harvard Business Review, Harvard Business School Publication USA
- People Matters online Magazine •
- Human Capital Magazine
- Vikalpa, Indian Institute of Management, Ahmedabad •

	Programme Objectives (POs)													PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1	3	2	0	0	0								0	0	0	
CO2	3	2	2	0	2								0	0	0	
CO3	0	2	2	3	2								3	3	3	
CO4	0	0	2	3	0								3	3	3	

#### Website(s):

1-Low, 2- Medium and 3- High Correlation

	MKTG1001	Marketing Management	L	Т	Р	S	J	C
TA			3					3
SERVE SHOULD	Course Owner	Department of Marketing	Syllabus version				1.0	
DE UNUSS	Course Pre- requisite(s)		Co	ontac	5	50		
	Course Co- requisite(s)		Date Approved					
	Alternate Exposure							

Marketing as a subject primarily caters to the consumerist instincts of an individual. The markets are driven by consumer behaviour, which has evolved and is much more demanding these days. Consumer satisfaction takes precedence for a business to be successful. This calls for managers to adopt creative and unique marketing strategies to gain a competitive advantage. Marketing Management equips managers with the required theoretical knowledge and practical skills to gain insights into the dynamic nature of the markets and then devise ways and means to manage them effectively.

#### **Course Objectives**

- 1. To explain the conceptual framework of marketing and its applications in "the real world."
- 2. To apply concepts of marketing to address problems and opportunities in the new marketing environment
- 3. To illustrate the functionality and application of elements of Marketing Mix
- 4. To create a suitable marketing plan for a product
- 5. To assess the range of common strategies used with each of the various promotional mix tools.

#### Unit I **Introduction to Marketing**

#### No of Hours-10

Definition, Nature, Scope, and Importance of Marketing - Core Concepts -Need, Want, Desire, Demand, Value, Exchange; philosophies of Marketing- Product - Production - Sales - Marketing - Societal -Relational marketing Concept of Marketing Myopia. Product Vs. service - Recent Trends in Marketing: Social Media Marketing and Digital Marketing.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- Understand issues of marketing with an emphasis on learning to develop responsive L1 marketing strategies that meet customer needs L2
- Explain how marketing creates utility through the exchange process L3
- Discuss the core concepts of marketing
- Assess how marketing has developed over the last century L4
- Explore the concept of marketing and marketing Myopia L5 •

Pedagogy Tools: Case study, Guest lectures, self-reading, polls, Conversation Boards

#### Unit II **Buyers** behavior

Factors influencing buyer behavior -five-step buyers decision process - Segmenting, Targeting and Positioning - Concept of Market Segmentation, Bases for Segmenting Consumer Markets, Targeting (T), Positioning (P) Value Proposition and USP

#### No of Hours-10

#### **Learning Outcomes:**

 After completion of this unit, the student will be able to
 Image: L1

 • Understand the process involved in human perception, learning, memory, and motivation in consumer decisions
 L1

 • Explain the factors influencing buyer behaviour
 L2

 • Outline the steps in consumer decision-making process
 L3

 • Describe the segmentation, targeting, and positioning process
 L4

 • Examine the significance of unique selling propositionto marketers
 L5

Pedagogy Tools: Case study, Guest lectures, self-reading, polls, Conversation Boards

Unit III	Marketing mix	No of Hours- 10
· · · · · · · · · · · · · · · · · · ·		110 01 110 410 10

Elements of the marketing Mix – four P's, extended three Ps of services. Product Decisions: Product Concept -Classification of Products – Product Life Cycle Stages, New Product Development

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- Describe the various types and levels of product
- Understand the concept of the marketing mix and service Mix L2
- Explain the process and issues associated with the development of new offerings L3
- Examine the idea of the product life cycle and identify the different stages L4
- Explore what service is, and describe the characteristics of a service L5

Pedagogy Tools: Case study, Guest lectures, self-reading, polls, Conversation Boards

#### Unit IV Pricing and Channels of Distribution No of Hours- 10

Pricing and Channels of Distribution: Pricing Objectives – Factors Influencing the Pricing Policy – Pricing Methods, Channels of Distribution: Definition – Nature – Types-Functions and levels of distribution channels

#### Learning Outcomes:

After completion of this unit, the student will be able to

• Understand the relationship between price, costs, quality, and value and L1. understand how to price new offering

•	Explain the pricing methods in a business setting	L2
•	Explore the objectives and factors influencing the pricing policy	L3
•	Outline the significance of distribution channels in creating value	L4
•	Assess the types and levels of a distribution channel	L5

Pedagogy Tools: Case study, Guest lectures, self-reading, polls, Conversation Boards

#### Unit V Promotion Mix

#### No of Hours-10

L1

Importance of Promotion – Managing Advertising – Sales Promotion –Personal Selling and Direct Marketing– Publicity and Public Relations. Integrated Marketing Communication (IMC), Social Marketing

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	Understand thepurpose of promotion for the business.	L1	
•	Examine the various promotional tools used by marketers	L2	
•	Explain the emergence of internet and interactive advertising		L3
•	Discuss the value of marketing communication	L4	

• Evaluate the role of IMC and social marketing in today's digital world L5

Pedagogy Tools: Case study, Guest lectures, self-reading, polls, Conversation Boards

#### **COURSE OUTCOMES**

- 1. Discuss the core concepts of marketing
- 2. Explain the factors influencing buyer behaviour
- 3. Understand the concept of the marketing mix and service Mix
- 4. Explain the pricing methods in a business setting
- 5. Understand thepurpose of promotion for the business

#### **Text Book**

1. Philip Kotler, Gary Armstrong, and Prafulla Agnihotri, Principles of Marketing, Pearson India, 17th Edition. New Delhi: 2018

#### **Additional reading**

#### References

- 1. Philip Kotler and Gary Armstrong, Principles of Marketing, Pearson India, Global Edition, 17th Edition. New Delhi: 2017.
- 2. Rajan Saxena, Marketing Management, Tata-McGraw Hill, Fifth Edition New Delhi:2015
- 3. Ramaswamy and Namakumari -Marketing Management- Indian Context -Global Perspective, Sage Publications India Pvt Ltd; Sixth Edition 2018
- 4. C. B. Gupta and Dr. N. Rajan Nair, Marketing Management: Text and Cases 15th Edition, S. Chand, and Sons 2012
- 5. N Rajan Nair and Sanjith R Nair, Marketing Revised Edition, Sultan Chand & Sons Tb, 2017

#### Journals

- 1. Indian Journal of Marketing
- 2. GITAM Journal of Management, GIM, GITAM University, Visakhapatnam
- 3. Vikalpa, IIM, Ahmedabad
- 4. Management Review, IIM, Bangalore

#### Websites

https://swayam.gov.in/

https://www.coursera.org/search?query=marketing%20management

	Programme Objectives (POs)										PSOs				
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	3	2	0	3								3	3	3
CO2	0	3	3	3	0								0	0	0
CO3	3	3	3	2	2								3	3	3
CO4	3	3	2	2	2								3	3	3
CO5	3	3	2	2	2								3	3	3
	CourseCode : IENT1021	CourseTitle	L	T	Р	S	J	C							
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G SERVE A		Entrepreneurship	2					2							
	CourseOwner	Dept of Entrepreneurship	Sy	Syllabusversio				1.0							
			n												
10 11 1 wes	CoursePre-requisite(s)		Co	ntac	thou	Irs		30							
OBEDI	CourseCo-requisite(s) DateApproved														
	AlternateExposure														

Entrepreneurship is an essential element for economic progress as it manifests its fundamental importance in different ways: a) by identifying, assessing, and exploiting business opportunities; b) by creating new firms and/or renewing existing ones by making them more dynamic; and c) by driving the economy forward – through innovation, competence, job creation- and by generally improving the well-being of society.

#### **Course Objectives**

This course intends the students to

- 1. Describe the characteristics of an entrepreneur and the types of entrepreneurs.
- 2. Understand the entrepreneurial Process and Government Support to Entrepreneurs.
- 3. Discuss the sources of business ideas and evaluate the business opportunity.
- 4. Explain the formation of a business and different sourcing of funds.
- 5. To know business plan preparation and business model development.

UNIT-I	Entrepre	No. of hours: 06						
Description of	Entrepreneur	and	Entrepreneurship,	Evolution	of	Entrepreneurship,		
Characteristics of Entrepreneur, Functions of an Entrepreneur, Types of Entrepreneurs,								
Growth of Entr	epreneurship in	othe	r countries and in In	ndia, Barrier	rs of	f Entrepreneurship		
and Role of Entrepreneurship in economic development.								

#### Learning outcomes:

After completion of this unit, the student will be able to

• Explain the concepts of entrepreneur and entrepreneurship L1

L1

L1

L1

- Describe the characteristics of an entrepreneur
- Recognise the functions and types of entrepreneurs L2
- Describe growth of entrepreneurship across the globe L1
- Explain the role of entrepreneurship in economic development.

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

#### UNIT-II Nature and Nurture of Entrepreneurs No. of hours: 06

Entrepreneurial Motives, Motivating factors of Entrepreneurship, Theories of Entrepreneurship, Entrepreneurial culture, Entrepreneurial Knowledge and Skills, Entrepreneurial Competencies, Entrepreneurial Process, Entrepreneurship Development Programs and Government Support to Entrepreneurs.

#### Learning outcomes:

After completion of this unit, the student will be able to

- List out the motivating factors of entrepreneurship L3
- Explain different theories of entrepreneurship

•	Co-relate entrepreneurial culture, knowledge and skills for entrepreneur	L3
	growth	
•	List out the entrepreneurial competencies	L3

Explain importance of EDPs and government support to entrepreneurs

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

### UNIT-III Business Incubation and Startup No. of hours: 06

Invention, Innovation and Imitation, Sources of Business Ideas, Opportunity Recognition, Brain Storming, Idea Possibility, Scanning the Environment, Gaps for new business and new ways of business, Evaluating Business Opportunity, Feasibility Study, Start-up/Entrepreneurial Eco system, Understanding the Market and the Customer Needs, Framing Unique Selling Proposition (USP), Risk and Return Assessment and Prototype Development.

#### Learning outcomes:

After completion of this unit, the student will be able to

•	Explain the concepts of the invention, innovation, and imitation	L1
•	List out of the sources of business ideas	L3
•	Recognise the techniques to develop business ideas	L3
•	Evaluate the business opportunities and know the process of the feasibility study	L3
•	Explain opportunities for start-ups and identify the market and customer needs	L1
•	Describe the importance of prototype development	L1

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

#### UNIT-IV Formation of Business and Sourcing of No. of hours: 06 Funds

Trademark/Patent/Business Name Registration Process-Sole Proprietorship, Partnership, Limited Liability Partnership (LLP), Private Limited Company and Public Limited Company Registration process, Sourcing of Funds- Cost of the project, Own Funds, Seed Capital, Angel Investment, Crowd Funding, Venture Capital, Private Placement, Term Loans and Capital Market Funds (Equity and Debt Funds).

### Learning outcomes:

After completion of this unit, the student will be able to

- List out the types of ownership in the business L3
- Describe the registration procedure and the cost of a project L1
- Explain sources of funds to finance the project

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

UNIT-VBusiness Plan and Business ModelNo. of hours: 06Conceptual framework of Business Plan- need and importance, Process of Business Planpreparation and Minimum Viable Product (MVP): Business Model Development - ValueProposition, Generic and Specific Business Models, Business Model Innovation, CcompetitiveAdvantage and Sustenance of the Business.

#### Learning outcomes:

After completion of this unit, the student will be able to

• Explain framework of a Business Plan

L1

L1

٠	Analyse the importance of a Business Plan	L4
٠	Explain the minimum viable product	L1
٠	Explain the business model development	L4
•	Evaluate the competitive advantage and sustenance of the business	L5

Pedagogy Tools: Case study, Discussion, Self-reading, Polls, Student Presentations

#### **Case Let (Not Exceeding 200 Words)**

#### **Course outcomes**

- Explain the evolution of entrepreneurship and functions of an entrepreneur.
- IdentifyEntrepreneurial Process, Entrepreneurship Development Programs and Government Support to Entrepreneurs.
- Analysebusinessopportunity in differentareas and Start-up/Entrepreneurial Eco system.
- Explain process of registration and the sources of funds available for an entrepreneur.
- Examine the importance of business plan preparation and business model development.

#### **TEXT BOOK**

- 1. Donald F. Kuratko (2014), Entrepreneurship: Theory, Process, Practice New Delhi: Cengage Learning.
- 2. Robert D. Hishrich, Mathew J Manimala, Entrepreneurship, Mc Grah Hill Education, New Delhi

#### REFERENCES

- 1. Arya Kumar, Entrepreneurship: Creating and Leading an entrepreneurial organization, Pearson Publications, New Delhi
- 2. Poornima M. Charantimath, Entrepreneurship Development Small Business Enterprises, Pearson Publications, New Delhi
- 3. Rajeev Roy, Entrepreneurship, Oxford Higher Education, New Delhi
- 4. Ernesto J.Poza (2017), Family Business, New Delhi: Cengage Learning, 4<sup>th</sup> Edition.
- 5. Raj Shankar (2012), Entrepreneurship Theory and Practice, New Delhi: Tata Mc Graw Hill.
- 6. S.Anil Kumar &S.C Purnima, *Entrepreneurship Development*, New Delhi: New Age Publishers.
- 7. A Shay and V Sharma, Entrepreneurship and New Venture Creation, New Delhi: Excel Books.
- 8. Vasant Desai, *Dynamics of Entreprenurial Development and Management*, New Delhi: Himalaya Publishing House.
- 9. Madhurima Lall and ShikhaSahai , Entrepreneurship, New Delhi: Excel Books
- 10. Rajeev Roy, "Entrepreneurship", 2nd ed, Oxford Higher Education, 2011
- 11. Bruce R. Barringer and R. Duane Ireland, Entrepreneurship: Successfully Launching New Ventures, 3rd Edition, Pearson Prentice Hall (2009).
- 12. NandiniVaidyanathan. Entrepedia, A Step-by –step Guide to Becoming An Entrepreneur in India, 2nd ed, Publisher: Embassy Books Publishers & Distributors, 2011
- 13. Bill Bolton, John Thompson (2014), Entrepreneurs: Talent, Temperament and Opportunity, Routledge 3rd Ed.
- 14. Poornima M. Charantimath (2012), Entrepreneurship Development Small Business Enterprises, New Delhi, Pearson

#### JOURNALS AND NEWS PAPERS

- 1. Harvard Business Review
- 2. International Journal of Entrepreneurial Behaviour and Research
- 3. International Journal of Small Business Management

	Programme Outcomes (POs)												PSO	)s		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1																
CO2																
CO3																
CO4																
CO5																

	CourseCode: FINA1061	CourseTitle	L	Т	Р	S	J	C			
G1 stave th		Essentials of Financial Management	3	0	0	0	0	3			
DER CAL	CourseOwner	Department of Finance	Sy	Syllabusversion 1			.0				
TO BE UNIVER	CoursePre-requisite(s)		Co	ntacth	ours	ours 30					
	CourseCo-requisite(s)		Da	teApp	rove	d					
	AlternateExposure										

Finance is the life blood of the business. Financial Management is one of the key areas of management. This Course helps in understanding of the fundamentals of financial management in terms of investment; financing and dividend policy. This course is designed to familiarize the students with the basic concepts and practices of Financial Management.

#### **Couse Objectives**

- To familiarize the students with the basic concept
- s of Financial Management.
- To give thorough understanding of the practices of basic Financial Management.

### UNIT-I:

#### **Financial Management: An Introduction**

Meaning and Definition of financial Management, Goals of Financial Management, Finance Functions, Organisation of finance function, Interface between Finance and other business functions, Financial Planning, Steps in Financial Planning, Factors Affecting Financial Plans, Time Value of Money.

#### UNIT-II:

#### **Investment Decisions**

Introduction to Capital Budgeting, Importance of capital Budgeting, Capital Budgeting Process, Techniques of Capital Budgeting - Accounting Rate of Return, Pay Back Period, Net Present Value, Internal Rate of Return and Profitability Index.

#### **UNIT-III:**

#### **Financing Decisions**

Cost of Capital - Cost of Debt, Cost of Preference Shares, Cost of Equity Shares, Cost of Retained Earnings, Weighted Average Cost of Capital; Leverages – Introduction – Types of Leverages – Measurement of Operating Leverage, Financial Leverage and Combined Leverage; Capital Structure – Introduction, Features of Ideal Capital Structure, Factors affecting Capital Structure, Theories of Capital Structure - Net Income Approach, Net Operating Income Approach, Modigliani and Miller Approach and Traditional Approach

#### **UNIT-IV:**

**Working Capital Management** - Introduction – Concepts of Working Capital, Objective of Working Capital Management, Need for Working Capital, Operating Cycle, Determinants of Working Capital, Estimation of Working Capital.

#### **UNIT-V:**

**Dividend Decisions** - Introduction, Forms of Dividends, Types of Dividend Policies, determinants of Dividend Policy - Theories of Dividend Policy - Walter Model, Gordon Model, Modigliani and Miller Model – Bonus Shares and Stock Split – Legal, procedural and Tax Aspects of Dividend Policy.

#### **Course Outcomes**

- make optimum decisions pertaining to raising funds, making investments and managing the assets of a corporation, big or small.
- Learn to manage finances with the ultimate goal of creating value.

#### **TEXT BOOK**

# M.Y. Khan & P.K. Jain. (2013), *Financial Management*. New Delhi: Tata McGraw Hill. REFERENCE BOOKS

- 1. I.M. Pandey (2010), *Financial Management*, New Delhi: Vikas Publications.
- 2. R.K. Sharma & Shashi K. Gupta (2014), *Financial Management*. Ludhiana: Kalyani Publications.

#### JOURNALS

- 1. Chartered Financial Analyst ICFAI Hyderabad.
- 2. GITAM Journal of Management, Visakhapatnam.
- 3. Journal of Financial Management and Analysis Centre for Financial Management Research.

	Programme Outcomes (POs)												PSO	Ds		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1																
CO2																
CO3																
CO4																
CO5																

	OPTS1011	Calculus-1	L	Т	P	S	J	С
H HARRE			4					4
	Course owner	Department of Operations	Syllabus version					)
	Course Pre-requisite(s)	NIL	Contact hours					
	Course Co-requisite(s)	NIL	Date Approved					
	Alternate Exposure							

This course is designed for students of business and economics. This course introduces the basic concept of limit and its application to continuity, differentiation, integration, maximization, minimization, and partial derivatives. Applications to the social sciences, especially business and economics, are stressed. The calculus of trigonometric functions is not covered.

#### **Course Objectives**

- 1. Understand basic knowledge of limits and continuity of mathematical functions.
- 2. Apply the properties of derivatives and their applications.
- 3. Analyses enhance problem-solving skills using the tools of differentiation.
- 4. Evaluate the provide the skills necessary for success in subsequent mathematics courses.
- 5. Evaluate competitive advantage for the business.

#### UNIT - I Basic mathematics

No of Hours:11

Introduction of basic concepts of definition indices and properties, Set, Relation, functions, fundamental of Trigonometric.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

e fundamental knowledge about Basic Mathematics	L2
pply basic concepts of Basic Mathematics.	L2
ematical ideas for real-world, business problems.	L4
develop problem-solving skills.	L5
	e fundamental knowledge about Basic Mathematics pply basic concepts of Basic Mathematics. ematical ideas for real-world, business problems. develop problem-solving skills.

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

UNIT - II	Limits and Continuity	No of Hours: 12
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Introduction, Interval and neighbourhoods, Limits and Continuity.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	Understand the basics of Limit and Continuity.	L2
•	Apply Limit and Continuity in solving business problems.	L3
•	Evaluate Limits and Continuity and its business application.	L5

#### UNIT – III Methods of differentiation

Introduction, Derivative as a rate of change, Slopes Derivative of a function, Elementary properties, Some Differentiation Formulas- The Product and Quotient Rules, Higher Order Derivatives, The Chain Rule.

### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	Understand the properties of Calculus						
•	Apply knowledge about Methods of differentiation	L3					
•	Evaluate algebraic facility with algebraic topics like linear, quadratic,	L5					
	exponential, logarithmic						
•	Explain and model business application	L2					

### No of Hours:13

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

UNIT - IV Differentiation

No of Hours: 12

No of Hours:12

Successive differentiation- Second order derivatives, derivative of implicit functions, Partial derivative of first and second order derivatives.

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	Understand the fundamental ideas of Successive differentiation- Second	L2
	order derivatives	
•	Apply the derivative of an implicit function, Partial derivative of first and	L3
	second order derivatives	
•	Analyse the basics of business economics and its role in business decisions	L4

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### **UNIT - V** Application of derivatives

Geometrical interpretation of a derivative, Equation of tangents and normal, Lengths of tangent, normal, subtangent and subnormal, Angles between two curves and condition for orthogonality of curves, problems involving maxima and minima values.

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	Understand the concept of Geometrical interpretation of a derivative	L2
•	Apply basic mathematical concepts which are applicable to business and	L3
	problems involving maxima and minima values.	
•	Evaluate the basic concepts of Equation of tangents and normal, Lengths of	L5
	tangent, normal, subtangent and subnormal and its role in business	
	decisions.	

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### **Course Outcomes**

- 1. Evaluate and develop problem-solving skills.
- 2. Evaluate Limits and Continuity and its business application.
- 3. Explain and model business application
- 4. Analyse the basics of business economics and its role in business decisions
- 5. Evaluate the basic concepts of Equation of tangents and normal, Lengths of tangent, normal, subtangent and subnormal and its role in business decisions.

#### Textbook(s):

1. CALCULUS, 9th Edition, by Anton, Bivens, and Davis.

	Pro	Programme Objectives (POs)											PS	PSOs		
	1	2	3	4	5	6	7	8	9	1	1	1	1	2	3	
										0	1	2				
CO1	3	2	0	0	2								2	2	2	
CO2	2	2	0	0	2								2	2	2	
CO3	3	3	0	0	1								1	3	3	
CO4	2	2	0	0	2								2	2	2	
CO5	2	2	0	0	2							1	2	2	2	

	BUAN1001	Programming in C++	L	Т	Р	S	J	С	
TA			2		2			3	
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		Fintech	version						
E AL	Course Pre-	Nil	Contact hours				45		
TO BE UNIT	requisite(s)								
	Course Co-	Nil	Date Approved						
	requisite(s)								
	Alternate Exposure								

 $C^{++}$  is a general purpose programming language and has imperative, object-oriented and generic programming features. Understanding the concepts in  $C^{++}$  would lay the foundation for learning the other programming languages.

#### **Course Objectives**

- 1. To acquaint the students with the programming concepts of C++
- 2. To give hands on experience in writing basic programs in C++
- 3. To enable students to write OOP programs in C++
- 4. To enable students to work with  $C^{++}$  files
- 5. To enable students to perform exception handling in C++

#### UNIT - I Title: Introduction to C++ No of Hours: 9

C++characteristics, Identifiers and Keywords, Basic Data Types, Variables and Constants, Input and Output Statements, Operators and Expressions

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	List out different C++ characteristics	L1
•	Associate data with its data types	L2
•	Distinguish between variables and constants	L2
•	Apply input and output statements in writing C++ program	L3
•	Write programs with operators and expressions in C++	L3

Pedagogy tools: Blended learning, Case let, video lectures, self-reading

#### UNIT - II Title Control Structures No of Hours: 16

Conditional Statements, Looping Statements; Arrays – Single dimensional, Multi dimensional, Working with Strings, Functions, Recursion, Pointers, Structures in C++

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

• Write C++ programs using conditional statements

٠	Write C++ programs using looping structures	L3
•	Write C++ programs using Arrays	L3
•	Distinguish different string functions	L2
•	Write user defined functions in C++	L3
•	Describe the concept of pointers	L2
•	Write C++ programs using structures	L3

Pedagogy tools: Blended learning, Case let, video lectures, self-reading

### UNIT - IIITitle Object Oriented ProgrammingNo of Hours: 8

Object Oriented Concepts, Classes and Objects, Constructors and Destructors, Inheritance – Single Inheritance, Multiple Inheritance, Protected Keyword, Polymorphis

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	Distinguish different OOP Concepts	L2
•	Write a C++ program to create class and objects	L3
•	Distinguish the difference between different access specifiers	L2
•	Compare different types of inheritance	L2
•	Describe the concept of polymorphism	L2

Pedagogy tools: Blended learning, Case let, video lectures, self-reading

UNIT - IV	Title C++ Files and Streams	No of Hours: 7
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Opening a File, Writing to a File, Reading from a File, Managing I/O Streams

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	Identify different modes of opening a file in C++	L1
•	Write a program that can create and write into a file using C++	L3
•	Write a program that can read from a file using C++	L3
•	Distinguish different I/O streams for file management	L2

# UNIT - VTitle Exception handlingNo of Hours: 5

Throwing an exception, catching an exception: The try block, Exception handler

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	Define exception	L1
•	Describe different terms associated with exception handling	L2
•	Write a program that handles exception	L3

Pedagogy tools: Blended learning, Case let, video lectures, self-reading

#### **Course Outcomes**

- 1. Write basic programs in C++
- 2. Write programs with control structures in C++
- 3. Write OOP based programs in C++
- 4. Work with files in C++
- 5. Apply exception handling in C++ programs

#### Textbook(s):

1.Balagurusamy E, Object Oriented Programming with C++, McGraw Hill

#### **Additional Reading**

#### **Reference Book(s):**

1. Herbert Schildt, C++: The Complete Reference, McGraw Hill

2. Robert Lafore, Object Oriented Programming in C++, Pearson Education

		<b>Programme Objectives (POs)</b>											PSOs			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1	0	1	2	1	1	3							2	1	1	
CO2	0	1	2	1	1	3							2	1	1	
CO3	0	1	2	1	1	3							2	1	1	
CO4	3	2	2	1	1	3							2	1	1	
CO5	3	2	2	1	1	3							2	1	1	

1-Low, 2- Medium and 3- High Correlation

	OTPS1061	Calculus-2	L	T	P	S	J	C	
TA			4					4	
Cy SERVE	Course owner	Dept. of Operations	Syllabı	is ve	rsio	n	1.0		
A INTE	Course Pre-	NIL	Contact hours				60		
TO BE UNIN	requisite(s)								
	Course Co-requisite(s)	NIL Date Approved							
	Alternate Exposure								

Sequence of differential and integral calculus with applications. The course covers the techniques and applications of integration, the transcendental functions, and their inverses, as well as an introduction to differential equations.

#### **Course Objectives**

- 1. Understand basic techniques for solving ordinary differential equations and applications.
- 2. Apply advanced techniques of integration and estimation of definite integrals.
- 3. Analyse investigate important applications of integration, such as arc length, area of surfaces, and volume of solids.
- 4. Evaluate the calculus of exponential, logarithmic, and inverse trigonometric functions.
- 5. Evaluate competitive advantage for the business.

#### UNIT - I Successive differentiation

#### No of Hours:11

Introduction, Successive differentiation – nth derivatives, Leibnitz theorem and its application

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	Understand	fundamental	knowledge	about	Successive	L2
	differentiation	n				
•	Explain and a	pply basic conce	pts of Basic Ca	lculus.		L2
•	Analyse calcu	ilus ideas to mod	lel, real-world p	oroblems.		L4
•	Evaluate and	develop problem	-solving skills.			L5

Pedagogy tools: Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### **UNIT - II** Indefinite integration

Standard forms, properties of integrals, Methods of substitution – integration of algebraic, Exponential, logarithmic, trigonometric, and inverse trigonometric functions, integration by parts, integration - partial fraction methods

#### Learning Outcomes:

After completion of this unit, the student will be able to

- Understand the basic idea of Indefinite integration •
- Apply knowledge of indefinite integration in solving business problems. L3 Evaluate indefinite integration and its business application. L5

#### UNIT - III **Definite integration**

The definite integrals, interpretation of definite integral as an area, Fundamental theorem of integrals calculus, properties of calculus

#### Learning Outcomes:

After completion of this unit, the student will be able to

- Understand the properties of definite integration • Apply knowledge about Fundamental theorem of integral calculus •
- Explain and do modelling of Business Applications •
- Evaluate the interpretation of definite integral as an area

### No of Hours: 12

L2

L2

L3

L4

L5

#### No of Hours:13

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### UNIT - IV Applications of integration

Areas under and between curves, integration using partial fractions, integration by parts, Some Business applications.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to	
• Understand the fundamental ideas of Applications of integration	L2
• Apply integration using partial fractions, integration by parts	L3
• Analyse application of integration in Business Problems	L4

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### UNIT - V Differential Equations

## No of Hours:12

No of Hours: 12

Formation of differential equations – Degree and order of an ordinary differential equation, Solving differential equation by Variable separable method, Homogeneous differential equation, non-Homogeneous differential equation, First and Second order Linear Differential Equations with constant coefficients

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

•	Understand the concept of fundamental ideas of formation of differential	L2
	equations	
•	Apply and explain degree and order of an ordinary differential equation,	L3
	solve differential equation by Variable separation method	
•	Analyse homogeneous differential equation and non-Homogeneous	L4
	differential equation	

• Evaluate the linear differential equations with constant coefficient L5

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### **COURSE OUTCOMES**

- 1. Analyse calculus ideas to model, real-world problems
- 2. Apply knowledge of indefinite integration in solving business problems.
- 3. Apply knowledge about Fundamental theorem of integral calculus
- 4. Apply integration using partial fractions, integration by parts
- 5. Analyse homogeneous differential equation and non-Homogeneous differential equation

#### Textbook(s):

1. The required text is CALCULUS, 9th Edition, by Anton, Bivens, and Davis.

	Programme Objectives (POs)											PSC	PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2	0	0	2								2	2	2
CO2	2	2	0	0	2								2	2	2
CO3	3	3	0	0	1								1	1	1
CO4	2	2	0	0	2								2	2	2
CO5	2	2	0	0	2								2	2	2

	BUAN1011	Data Structures with C++	L	Т	J	С		
GI STRUE			2		2			3
A statement	Course Owner	sion	1.0					
and a	Course Pre-requisite(s)	Data Structures with C++	Contact hours 45					
TO BE UNION	Course Co-requisite(s)	NIL	Date	e Ap	prov	ed		
	Alternate Exposure							

Data Structure is a particular way of organizing data in a computer so that it can be used efficiently. Understanding the data structure will help in efficiently managing the data and coming up with effective algorithms. The implementation of data structures are done in C++, one of the most popular object oriented language.

#### **Course Objectives**

- 1. To understand how to calculate time complexity of different algorithms
- 2. To understand how to work with Linked Lists
- 3. To implement Stack and Queue in C++
- 4. To perform Searching and Sorting using C++
- 5. To understand different concepts in trees and graphs

#### **Unit – I: Introduction to Data Structures**

Basic Concepts, Classification of Data Structures, Algorithm: Basics, Algorithm Complexity and Asymptotic Analysis, Types of Algorithms - Greedy Algorithms, Divide and Conquer, Dynamic Programming

#### **Learning Outcomes:**

•	Distinguish different types of data structures	L2
•	Evaluate the complexity of an algorithm based on asymptotic analysis	L5
•	Distinguish different types of Algorithms	L2

#### Unit – II: Linked Lists

Concept, Types of Linked List - Single, Double, Circular, Operations in Linked List, Applications of Linked List

#### **Learning Outcomes:**

•	Describe a linked list	L2
•	Write a program to implement single linked list	L3
•	Write a program to implement double linked list	L3
•	Write a program to implement circular linked list	L3
•	Describe different applications of Linked Lists	L3

#### No of hours: 9

No of hours: 9

#### Unit – III: Stack and Oueue

Introduction to searching - Linear search, Binary Search, Sorting - Bubble, Insertion, Selection, Quick, Hashing

#### **Learning Outcomes:**

•	Distinguish between Stack and Queue	L2
•	Write a program to implement Stack	L3
•	Write a program to implement Queue	L3
•	Describe different applications of Stack	L2
•	Describe different applications of Queue	L2

#### **Unit – IV: Searching and Sorting**

Concept, Operations on stack, Array representation, Linked List representation, application of stacks, Queues - Concept, operation on queues, types of queues, Array representation, Linked List representation application of queues

#### **Learning Outcomes:**

•	Distinguish between different searching algorithms	L2
•	Distinguish between different sorting algorithms	L2
•	Write a program to implement linear search	L3
•	Write a program to implement binary search	L3
•	Write a program to bubble sort	L3

#### **Unit – V: Trees and Graphs**

#### No of hours: 9

Trees - Basic terminology, Types of trees - General trees, Forest, Binary Tree, Binary Search tree, Creating binary tree from general tree, traversing a binary tree, application of trees, Graphs - Basic terminology, Directed graph, representation of graph, graph traversal algorithms, Application of graphs

#### **Learning Outcomes:**

•	Describe the concepts of trees and graphs	L2
•	Distinguish different types of trees and graphs	L2
•	Construct a binary search tree with a given set of numbers.	L3
•	Convert general tree to binary tree	L3
•	Identify different ways to traverse a trees and graphs	L3

#### **COURSE OUTCOMES**

- 1. Distinguish different types of data structures
- 2. Describe different applications of Linked Lists
- 3. Distinguish between Stack and Queue
- 4. Distinguish between different sorting and searching algorithms
- 5. Distinguish different types of trees and graphs

No of hours: 9

No of hours: 9

#### **TEXT BOOKS**

Adam Drozdek, Data Structures and Algorithms in C++, Cengage Learning

#### **REFERENCE BOOKS**

- 1. Mark Allen Weiss, Data Structures and Algorithm Analysis in C++, Pearson Education
- 2. Seymour Lipschutz, Data Structures (Schaum's Series), McGraw Hill Education

	Programme Objectives (POs)													PSOs			
	1	2	3	4	5	6	7	8	9	1 0	1 1	1 2	1	2	3		
CO1	0	1	2	1	1								2	2	2		
CO2	0	1	2	1	1								2	2	2		
CO3	0	1	2	1	1								2	2	2		
CO4	0	1	2	1	1								2	2	2		
C05	0	1	2	1	1	3											

1-Low, 2- Medium and 3- High Correlation

	BUAN1021	Data Analysis with MS Excel	L	Т	Р	S	J	С
GI TA			2		2			3
AVER CONTRACTOR	Course Owner	Dept. of Business Analytics	Syllabus version			sion	1.0	
	Course Pre- requisite(s)		Contact hours 4					
	Course Co-requisite(s)	NIL	Da	te Aj	oprov	ved		
	Alternate Exposure							

Business analytics refers to the skills and technologies for exploring and investigating large amount of data to attain new insights that will help an organization to gain a competitive edge. MS Excel is spreadsheet software that is used by many companies to perform basic analysis.

#### **Course Objectives**

- 1. To understand importance of Business Analytics
- 2. To understand how to perform basic operations in Excel
- 3. To understand how to perform basic statistical analysis with Excel
- 4. To understand how to perform what if analysis
- 5. To understand how to work with Pivot tables and charts

#### Unit – I: Introduction to Business Analytics

#### No. of Hours: 9

Benefits of Business Analytics, Types of Data – Structured, Semi Structured and Unstructured, Application areas of Business Analytics, Categorization of Analytical methods and models – Descriptive, Diagnostic, Predictive and Prescriptive

#### **Learning Outcomes**

٠	Describe different types of data	L2
•	Distinguish different types of Business Analytics	L2

Discuss different applications of Business Analytics

#### Unit – II: Working with MS Excel

No. of Hours: 9

No. of Hours: 9

No. of Hours: 9

L2

Uses of Excel, Working with MS Excel Workbook, Worksheet Management, Sorting, Filters, Conditional Formatting, Working with Charts, Trend lines

#### **Learning Outcomes**

•	Identify different components of Excel	L2
•	Perform basic operations in Excel	L3
•	Apply sorting to a given set of data	L3
•	Apply conditional formatting to a given set of data	L3
•	Create different types of charts	L3
•	Apply appropriate trend line functions for a given data	L5

#### Unit – III: Working with Excel Functions

Text Functions, Logical Functions, Lookup Functions, Math Statistical Functions

#### **Learning Outcomes**

•	Apply different text functions	L3
•	Apply different logical functions	L3
•	Apply different lookup functions	L3
•	Apply different math functions	L3

#### Unit – IV: Statistical Analysis with Excel

Working with Statistical Functions, Descriptive Statistics in Excel, Using Data Analysis Tool pack in Excel

#### **Learning Outcomes**

•	Apply statistical functions in Excel	L3
•	Apply descriptive statistics in Excel	L3
•	Identify different elements in data analysis tool pack	L1
•	Perform regression on a given dataset	L5
•	Perform Anova on a given dataset	L5

#### **Unit – V: What if Analysis and Pivot Tables**

Data Tables, Scenario Manager, Goal Seek, Creating PivotTables, Working with Pivot Charts, Working with Power Pivot

#### **Learning Outcomes**

•	Distinguish different programs under what-if analysis	L2
•	Apply data table for a given problem	L5
•	Apply scenario manager for a given problem	L5

#### No. of Hours: 9

• Apply goal seek for a given problem
---------------------------------------

• Apply pivot tables and chart on a given problem L5

### **COURSE OUTCOMES**

- 1. Distinguish different types of Business Analytics
- 2. Identify different components of Excel
- 3. Apply different functions in Excel
- 4. Perform statistical analysis in Excel
- 5. Distinguish different programs under what-if analysis

#### Textbook(s):

Wayne L. Winston, Microsoft Excel - Data Analysis and Business Modeling, Prentice Hall of India

### **Additional Reading**

#### **Reference Book(s):**

Paul Mcfedris, Excel Data Analysis Visual Blueprint, Wiley

		Programme Objectives (POs)									PSOs					
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1	1	2	3	3	3								3	3	3	
CO2	1	2	3	3	3								3	3	3	
CO3	1	2	3	3	3								3	3	3	
CO4	1	2	3	3	3								3	3	3	
CO5	1	2	3	3	3								3	3	3	

	OPTS1111	Discrete Mathematics	L	Τ	P	S	J	C
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TO BE UNIVER	Course Pre-requisite(s)	NIL	Con	tact	hou	rs	60	)
	Course Co-requisite(s)	NIL	Date App	e rove	ed			
	Alternate Exposure							

#### Introduction

To introduce the students to the topics and techniques of discrete methods and combinatorial reasoning. To introduce a wide variety of applications. The algorithmic approach to the solution of problems is fundamental in discrete mathematics, and this approach reinforces the close ties between this discipline and the area of computer science.

#### **Course Objectives**

- Understanding to demonstrate skills in solving mathematical problems
- Apply to comprehend mathematical principles and logic
- Analyze to demonstrate knowledge of mathematical modelling and proficiency in using mathematical software
- Evaluate to communicate effectively mathematical ideas/results verbally or inwritingCreate an edge for the business

#### UNIT - I Mathematical Logic

Propositional Calculus: Statements and Notations, Connectives, Well Formed Formulas, Truth Tables, Tautologies, Equivalence of Formulas, Duality Law, Tautological Implications, Normal Forms, Theory of Inference for Statement Calculus, Consistency of Premises, Predicate Calculus: Predicative Logic, Statement Functions, Variables, Free and Bound Variables,

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	Understanding the basics of Connectives, Construction of truth	L2
	tables Tautology and Contradiction, Logical equivalences	
•	Applying min terms and max terms for finding PDNF and PCNF	L2
•	Analysing the validity of the argument by using (without using)	L4
	truth tables by the accepted rules(laws) of logic	
•	Evaluating and identifying programming errors efficiently through	L5
	enhanced logical capabilities	

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### UNIT - II Set Theory

#### No of Hours: 12

Introduction, Operations on Binary Sets, Principle of Inclusion and Exclusion, *Relations:* Properties of Binary Relations, Relation Matrix, Operations on Relations, Partition and Covering, Transitive Closure, Equivalence, Compatibility and Partial Ordering Relations, Hasse Diagrams, *Functions:* Bijective Functions, Composition of Functions, Inverse Functions.

#### **Learning Outcomes:**

After completion of this unit, the student will be able to

- Understanding the basic definition of set and study the properties of sets, L2 Cartesian product, Relation, and their properties
- Applying and using the terms cardinality, finite, countably infinite, L3 unaccountably infinite, and determine which of these characteristics is

#### No of Hours:11

associated with a given set.

• Analysing equivalence relations, compatibility relations and partial order L4 relations and Hasse diagrams.

#### **UNIT - III** Combinatorics

Basic of Counting, Permutations, Permutations with Repetitions, Circular Permutations, Restricted Permutations, Combinations, Restricted Combinations, Generating Functions of Permutations and Combinations, Binomial Coefficients, Binomial Theorem.

#### Learning Outcomes:

After completion of this unit, the student will be able to

- Understanding basics of building blocks of all counting problems such as L2 sum rule and product rule
- Applying counting techniques for problems based on permutations and L3 combinations
- Analysing recurrence relations and solving recurrence relations by L4 generating functions
- Evaluating sequences and finding general terms. Finding binomial L5 coefficients

**Pedagogy tools:**Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### **UNIT - IV** Recurrence Relations

#### No of Hours: 12

Generating Functions, Function of Sequences, Partial Fractions, Calculating Coefficient of Generating Functions, Recurrence Relations, Formulation as Recurrence Relations.

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	Understanding the closed form of solution using generating functions	L1
•	Applying the Formulating recurrence relations which completely explains	L3
	physical problems	
•	Analysing and solving recurrences, relations by substitution	L4

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### **UNIT - V** Graph Theory

#### No of Hours:12

Basic Concepts of Graphs, Sub graphs, Matrix Representation of Graphs: Adjacency Matrices, Incidence Matrices, Isomorphic Graphs, Paths and Circuits, Eulerian and Hamiltonian Graphs, Euler's Formula.

#### Learning Outcomes:

After completion of this unit, the student will be able to

•	Understanding the basics of nomenclature of graphs	L2
•	Applying and explaining the basic concepts of knowing about walk, trial,	L3
	path, cycle, circuit of a graph	
•	Analysing Eulerian and Hamiltionian graphs and their applications	L4

**Pedagogy tools:** Classroom practice, Discussion, Presentations, Assignment, Quizzes, Graphs, Investigate, Diagrams, polls.

#### **Course outcomes**

#### No of Hours:13

- Understanding the basics of Connectives, Construction of truth tables Tautology and Contradiction, Logical equivalences
- Applying and using the terms cardinality, finite, countably infinite, unaccountably infinite, and determine which of these characteristics is associated with a given set.
- Analysing recurrence relations and solving recurrence relations by generating functions

#### Textbook(s):

- 1. Discrete Mathematical Structures with Applications to Computer Science, J. P. Tremblay and P. Manohar, Tata McGraw Hill.
- 2. Elements of Discrete Mathematics-A Computer Oriented Approach, C. L. Liu and D. P. Mohapatra, 3rdEdition, Tata McGraw Hill.
- 3. Discrete Mathematics and its Applications with Combinatorics and Graph Theory, K. H. Rosen, 7th Edition, Tata McGraw Hill.
- 4. Discrete Mathematics for Computer Scientists and Mathematicians, J. L. Mott, A. Kandel, T.P. Baker, 2nd Edition, Prentice Hall of India.
- 5. Discrete Mathematical Structures, BernandKolman, Robert C. Busby, Sharon Cutler
- 6. Ross, PHI.
- 7. Discrete Mathematics, S. K. Chakraborthy and B.K. Sarkar, Oxford, 2011.

	Prog	ramm	e Outc	omes	(POs)								PSO	S	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1															
CO2															
CO3															
CO4															
CO5															

	CourseCode:	CourseTitle	L	Т	P	S	J	C
	<b>OPTS1121</b>							
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OBEON	requisite(s)							
	CourseCo-requisite(s)		Da	teAp	opro	ved		
	AlternateExposure							

#### **Course description and learning outcomes**

Business Statistics is important, for future managers, to have a firm understanding of the basics of statistics and its application to analyze and create an edge for the business. Student will be able to understand the measurement systems variability, control processes (as in statistical process control or SPC). The student should summarize data, and to make data-driven decisions.

#### **Course objectives**

- Enable the students to develop basic knowledge in Statistics
- Provide understanding in some basic statistical techniques which are used for solving business problems.
- Understand the basic concepts of Probability and Statistics
- Apply the analytical techniques in business transactions that would help in making effective business decisions

### **UNIT I:** (CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6) No of hours 10

**Measures of Central Tendency**: Introduction, Arithmetic mean, geometric mean, harmonic mean, median, mode. Measures of Dispersion: Introduction, Range, Quartile deviation, Mean deviation, Standard deviation, combined mean and combined standard deviation.

#### Learning Outcomes

After completion of this unit, the student will be able to

- Understand the purposes of measures of central tendency.(L1)
- Calculate and interpret measures of central tendency and Measure of dispersion for a set of data.(L3)
- State the advantages and disadvantages of the measures of central tendency and Measure of dispersion (L4)

**Pedagogy Tools**: Classroom practice, Discussion, Student Presentations, Assignment, Quiz's ,Graphs, Create, Investigate ,Diagrams, polls.

### **UNIT II: (C01,C02,C03,C04,C05,L1,L2,L3,L4,L5,L6)** No of hours 13

**Correlation Analysis:** Introduction, types of correlation, Methods of Correlation analysis, Scatter diagram method, Karl Pearson's correlation coefficient, Coefficient of determination, Spearman's rank correlation coefficient.

**Regression Analysis**: Introduction, Types of regression models, Significance of Regression Analysis, Methods of finding Regression Equations, Least Squares and Using Regression Coefficient methods, Prediction using the Regression Equations.

#### Learning Outcomes

After completion of this unit, the student will be able to

- Calculate and interpret the correlation between two variables.(L3)
- Determine whether the correlation and Regression are significant.(L4)

- Calculate the simple linear regression equation for a set of data and know the basic assumptions behind regression analysis.(L2)
- Recognize regression analysis applications for purposes of description and prediction.(L5)

**Pedagogy Tools**: Classroom practice, Discussion, Student Presentations, Assignment, Quiz's ,Graphs, Create, Investigate, Polls.

### **UNIT III: (CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6)** No of hours 12

**Probability** – Definitions of various terms, Types of probability, Bayes' Theorem. Random variable and Probability Distribution – Definition, Probability distribution of discrete and continuous random variable, Mean and Variance.

**Discrete distribution** – Introduction, Binomial distribution, Poisson distribution, Mean and Variance. **Continuous distribution**– Normal distribution, Properties of Normal distribution, Area under Standard Normal Probability Curve and Importance of Normal Distribution.

#### Learning Outcomes

After completion of this unit, the student will be able to

- Understand and use the terminology of probability. (L1)
- Determine whether two events are mutually exclusive and whether two events are independent. (L3)
- Calculate probabilities using the Addition Rules and Multiplication Rules.(L2)
- Recognize and understand discrete and continuous probability distribution functions, in general.(L4)
- Recognize the binomial and Poisson probability distribution and apply it appropriately. (L5)
- Recognize the normal probability distribution and apply it appropriately. (L6)

**Pedagogy Tools**: Classroom practice, Discussion, Student Presentations, Assignment, Quiz's ,Graphs, Create, Investigate ,Diagrams, Polls.

UNIT IV: (CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6) No of hours 10 Index numbers, Introduction, Characteristics and Uses of index numbers, Types of Index Numbers, Laspyre, Paasche's, Fisher's, Marshall-Edgeworth, Dorbish and Bowley, Limitations of index numbers. Learning Outcomes

After completion of this unit, the student will be able to

- construct simple price, quantity, and value indexes.(L1)
- construct weighted price, quantity, and value indexes. (L2)
- use the consumer price index to determine the purchasing power of the dollar and to compute real income. (L3)
- Calculate of Laspyre, Paasche's, Fisher's, Marshall-Edgeworth, Dorbish and Bowley method (L4)

**Pedagogy Tools**: Classroom practice, Discussion, Student Presentations, Assignment, Quiz's ,Graphs, Create, Investigate ,Diagrams, Polls.

### **UNIT V: (CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6)** No of hours 10

**Time series analysis** – Introduction, Components of a time series – Secular trend, Short term, Random or Irregular variations, Measurement of trend – Free hand method, Method of linear Curve fitting by the principle of least squares, Method of Semi - Averages and Moving average.

### Learning Outcomes

After completion of this unit, the student will be able to

- Demonstrate advanced understanding of the concepts of time series and their application to health, climate, finance and other areas.(L2)
- Apply ideas to real time series data and interpret outcomes of analyses.(L3)
- Understand and apply the concept of stationarity to the analysis of time series data in various contexts (such as actuarial studies, climatology, economics, finance, geography, meteorology, political science, and sociology);(L4)
- Develop fundamental research skills (such as data collection, data processing, and model estimation and interpretation) in applied time series analysis.(L2)
- apply various techniques for the modeling: including parameter estimation, assumption verification, and residual sequence diagnosis(L6)

**Pedagogy Tools**: Classroom practice, Discussion, Student Presentations, Assignment, Quiz's ,Graphs, Create, Investigate ,Diagrams, Polls.

### **COURSE OUTCOMES**

- Understand the measurement systems variability
- Apply basic statistical techniques to measure relative changes in price, production or any such quantities of economic interest
- Use statistical techniques to analyse business problems
- Evaluate business problems
- Perform Time series analysis and measure different trends in data series and examine relationship between two quantitative variables

### Note: Proofs of theorems and derivations of problems and distributions are excluded.

#### **Text Book:**

Sharma, J. K. (2013), Business statistics, New Delhi: Pearson Education.

#### **REFERENCE BOOKS**

- 1. Gupta, S.C. & Gupta, I. (2012), Business Statistics, Mumbai: Himalaya Publishing House.
- 2. Levine, D.M., Berenson, M. L. & Stephan, D. (2012), Statistics for managers using Microsoft Excel, New Delhi: Prentice Hall India Pvt.
- 3. Aczel, A. D. & Sounderpandian, J. (2011), Complete Business Statistics, New Delhi: Tata McGraw Hill.
- 4. Anderson, D., Sweeney, D., Williams, T., Camm, J., & Cochran, J. (2013), Statistics for Business and Economics, New Delhi: Cengage Learning.
- 5. Davis, G., &Pecar, B. (2014), Business Statistics using Excel, New Delhi: Oxford University Press.

### JOURNALS

- 1. American Statistician, American Statistical Association, USA.
- 2. Journal of the American Statistical Association, American Statistical Association, USA
- 3. Journal of Mathematics and Statistics, Science Publications, USA
- 4. Annals of the Institute of Statistical Mathematics, Springer Netherlands, Netherlands

	Pro	gramn	ne Out	comes	(POs)								PSO	S	
	1 2 3 4 5 6 7 8 9 10 11 12										12	1	2	3	
CO1															
CO2															
CO3															
CO4															
CO5															

	CourseCode:BUAN1	CourseTitle	L	Т	Р	S	J	С
TA	051	Data Vigualization with	2					2
G serve da		Tableau						Z
Les and Le	CourseOwner	Department of Business	Sy	llabu	isvei	sio		1.0
TO BE UNITE		Analytics	n					
	CoursePre- requisite(s)		Co	ntac	thou	rs		
	CourseCo-requisite(s)		Da	teAp	opro	ved		
	AlternateExposure							

Data Visualization is the presentation of data in a pictorial or graphical format. Today analysts are required to deal with large amount of data. Visualization helps in presenting the data in pictorial or graphical format. Such visual representation will help in providing better insights to the decision maker. Tableau is popular visualization tool to create visual data.

#### **Course Objectives**

- To understand the concept and benefits of visualization
- Understand the usage of different visual encoding
- Provide hands on working with Tableau tool

**UNIT-I: Introduction to Visualization:** Concept and importance of data visualization, Choosing appropriate visual encodings – ordering of items, number of distinct values, structure of visualization, Positioning - Placement and Proximity, Graphs and Layouts, Colors, Size, Text and Typography, Shape, Lines.

**UNIT-II: Working with Tableau Data Source and Basic Charts:** Introduction to Tableau, Connecting to Data Source: Text Files, Excel, Access, other databases, merging multiple data sources, Univariate Charts – Creatingtables, bar graphs, pie charts, histograms, line charts, stacked bar graphs, box plots, Showing aggregate measures, Bivariate Charts – Creating tables, scatter plots, swapping rows and columns, adding trend lines, selecting color palettes, using dates

**UNIT III: Fields, Hierarchies & Filters:**Using predefined fields, calculating percentages, applying ifthen logic, applying logical functions, showing totals and percentages, discretizing data, manipulating text, aggregate data. Grouping and creating hierarchies in Tableau. Creating and using Filters in Tableau.

**UNIT–IV: Multivariate Charts and Maps:** Facets, area charts, bullet graphs, dual axes charts, Gnatt charts, heat maps, Maps – Setting geographical roles, placing marks on map, overlaying demographic data, choropleth maps, polygon shapes, customizing maps

UNIT-V: Dashboards in Tableau: Adding title and caption, font size and colors, adding various

marks, adding reference lines, using presentation mode, adding annotation, adding drop-down selectors, search box selectors, slider selectors, creating dashboards, creating animated visualizations. Connecting and using Tableau Public Server.

#### **Course Outcomes**

- Understand and design data visuals with different visual encodings
- Understand the usage of different visual encoding
- Work with User defined fields
- Customize the presentation with different elements in Tableau

#### **Reference Books:**

- The Visual Display of Quantitative Information by Edward Tufte
- Envisioning Information by Edward
- Tufte Visualizing Data by Ben Fry

	Prog	gramn	ne Out	comes	(POs)								PSO	S	
	1 2 3 4 5 6 7 8 9 10 11 12										12	1	2	3	
CO1															
CO2															
CO3															
CO4															
CO5															

	CourseCode: BUAN1061	CourseTitle	L	Т	Р	S	J	C
GT SERVE		Data Analysis with R	3					3
• 2 6 2 2 •	CourseOwner	Department of Operations	Sy	llabus	versi	on	1	.0
	CoursePre-		Co	ntacth	ours			
TO BE UNIVE	requisite(s)							
	CourseCo-requisite(s)		Da	teApp	rove	d		
	AlternateExposure							

R is an open source programming language for statistical computing and graphics. Being open source, it has found huge acceptance among data scientists and is one of the popular tool for data science and machine learning.

#### **Course Objective**

- Understand the programming concepts of R
- Gain hands on experience in working with R

**UNIT-I:** Introduction to R: Concept of R, Installing R, IDE of R, Getting help from R, Mathematical Operators and Vectors, Assigning Variables, Special Numbers, Logical Vectors, Classes, Different types of numbers, Changing classes, Examining Variables, The workplace, Vectors – Sequences, Lengths, Names, Indexing Vectors, Vector Recycling and Repetition, Matrices and Arrays – Creating Arrays and Matrices, Rows, Columns, Dimensions, Indexing Arrays, Combining Matrices, Array, Arithmetic

**UNIT-II: Lists, Functions, Strings and Factors**: Lists – Creating lists, Automatic and recursive variables, List dimensions and arithmetic, indexing lists, Conversion between vectors and lists, Combining lists, NULL, Pairlists, Data Frames – Creating Data Frames, Indexing Data Frames, Basic Data Frame Manipulation, Environments, Functions – Creating and Calling Functions, Passing functions, variable scope, Strings – Constructing and printing strings, Formatting numbers, Special characters, Changing case, Extracting Substrings, Splitting Strings, File paths, Factors – Creating, factor levels, ordered factors, conversion of variables

**UNIT–III: Flow Controls:** Conditional – if and else, Vectorized if, Multiple Selection, Loops – repeat loops, while loops, for loops, Advanced looping – replication, looping over lists, looping over arrays, Multiple – Input Apply, Instant vectorization, Split-Apply-Combine

**UNIT-IV: Statistics with R:** Summarizing data, Calculating relative frequencies, Tabulating Factors and creating contingency tables, Testing categorical variables for independence, Calculating Quantiles of a dataset, Converting data into z-scores, t-test, testing sample proportions, testing normality, comparing means of two samples, testing correlation for significance, Linear regression in R, Logistic Regression in R Clustering with R

**UNIT-V: Packages and Visualization:** Loading packages, search path, libraries and installed packages, installing packages, maintaining packages, Visualization – The three plotting systems, Scatterplots – base graphics, lattice graphics, ggplots, Line Plots, Histograms, Box Plots, Bar Charts, Other plotting packages and systems

#### **Course Outcomes:**

- Understand the elements of R programming
- Write basic programs in R language
- Write programs in R using control structures
- Perform data visualization with R
- Perform statistical analysis in R language

#### **Reference Books**

- Sandip Rakshit, R Programming for Beginners, McGraw Hill Education (India)
- Seema Acharya, Data Analytics using R, McGrawHill Education (India)
- Andrie de Vries, Joris Meys, R for Dummies A Wiley Brand, 2nd Edition, John Wiley and Sons, Inc

	Pro	gramn	ne Out	tcomes	(POs)								PSO	s	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1															
CO2															
CO3															
CO4															
CO5															

	CourseCode: BUAN1071	CourseTitle	L	T	Р	S	J	C
South State		PREDICTIVE ANALYTICS AND DECISION MAKING	3					3
TO BE UNIVE	CourseOwner	Department of Business Analytics	Sy	llabu	sversi	on	1	1.0
	CoursePre- requisite(s)		Co	ntaci	thours			
	CourseCo-requisite(s)		Da	teAp	prove	ed		
	AlternateExposure							

Predictive Analytics is a discipline that deals with the application of statistical and machine learning techniques on historical data to predict future outcomes. In this competitive age, predictive analytics not only helps in making informed decisions and solve business problems but also to have an edge over the competitors.

#### **Course Objectives**

- Understand the basic statistical techniques required for forecasting
- Understand the basic concepts of Probability and Statistics
- Provide understanding in some basic statistical techniques which areused for solving business problems.
- Apply these techniques constructively to make effective business decisions
- Apply the analytical techniques in business transactions that would help in making effective business decisions

## UNIT I: (10 sessions)(CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6)

**Hypothesis Testing:** Introduction, Types of Hypothesis, Hypothesis Testing Procedure, One sample and Two sample Test for Mean (Students t-distribution and Z-test); Introduction to Chi-Square distribution, Chi-Square test for Goodness of fit and for Independence of Attributes.

### UNIT II: (10 sessions)(CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6)

**Analysis of Variance:** Introduction, Testing equality of population means (One –Way Classification), Testing equality of population means (Two –Way Classification)

### UNIT III:(10 sessions)(CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6)

**MultipleCorrelationAnalysis**:Introduction, Significance of multiple correlation, Multiple and partial correlation, Relation between multiple and partial correlation coefficients.

### UNIT IV:(10 sessions)(CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6)

**MultipleRegression Analysis**: Introduction, Significance of Multiple Regression Analysis, Estimating the parameters of Multiple Regression by method of Least Squares and Using Regression Coefficient methods, Relation between partial regression coefficients and correlation coefficients, Standard Error of Estimates for Multiple regression.

### UNIT V: (10 sessions)(CO1,CO2,CO3,CO4,CO5,L1,L2,L3,L4,L5,L6)

**Forecasting Trend:** Introduction, Linear trend model, Exponential trend, Measurement of Seasonal effects – Method of Simple Average, Ratio-to-Trend Method, Ratio-to-Moving Average Method,Link

Relative Method.

#### **Course Outcomes**

- Understand the measurement systems variability
- Apply basic statistical techniques to measure relative changes in price, production or any such quantities of economic interest
- Ûse statistical techniques to analyse business problems
- Solve forecasting problems
- Make effective decisions using statistical techniques

#### Note: Proofs of theorems and derivations of problems and distributions are excluded.

#### **TEXT BOOK**

J. Joseph Frrancis (2015), Business statistics, New Delhi: Cengage Learning.

#### **REFERENCES BOOKS**

- 1) Bruce L. Bowerman, Richard T.O'Connell, Emily S. Murphree (2015), *Business Statistics in practice*, New Delhi: McGraw HillEducation (India) Private Ltd.
- 2) David M.Levine, david Stephan Timothy C.Krehbiel, Mark 1 Berenson (2015), *Statistics for managers using Microsoft Excel*, New Delhi:Prentice Hall India Pvt.
- 3) Amir D.Aczel, JayavelSounderpandian (2015), *Complete Business Statistics*, New Delhi:Tata McGraw Hill.
- 4) S.P. Gupta & M.P. Gupta (2015), *Business Statistics*, New Delhi: Sultan Chand & Sons.

#### JOURNALS

- 1) GITAM Journal of Management, GIM, GITAM (Deemed to be University), Visakhapatnam
- 2) International Journal of Operations and Quantitative Management, College of Business, Prairie View A&M University, USA
- 3) Journal of Applied Statistics, Routledge, Taylor & Francis Group, UK

	Prog	ramm	e Outo	comes	(POs)								PSO	S	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1															
CO2															
CO3															
CO4															
CO5															

	CourseCode: BUAN1081	CourseTitle	L	T	P	S	J	C
GI SERVE		Artificial Intelligence	3					3
* ALL shunde	CourseOwner	Department of Business Analytics	Sy n	llabı	isvei	rsio		1.0
TO BE UNITE	CoursePre- requisite(s)		Co	ntac	thou	rs		
	CourseCo-requisite(s)		Da	teAp	opro	ved		
	AlternateExposure							

Artificial Intelligence has its foundation in Boolean algebra. With the introduction of computers, AI has gained prominence, where attempts were made to make computers think and reason like humans. It has come a long way from playing games to intelligent robots. This course aims to introduce the basic concepts of AI, Expert Systems and Machine Learning.

#### **Course Objective**

- To understand the strategies of state space.
- To understand AI Knowledge representation.
- To understand expert systems, machine learning and fuzzy logic.

### Unit I (8 sessions) (CO1 & L3)

Introduction to the Propositional and Predicate Calculus, Inference Rules and use for Predicate Calculus Expression

#### Unit II (8 sessions) (CO2 & L3, L5)

Graph Theory, Strategies for State Space Search and Control Strategies, Heuristic Search, Monotonicity and Informedness

#### Unit III (8 sessions) (CO3 & L4)

Recursion based search, Pattern-Directed search, AI Challenge Knowledge Representation, Problem reduction and game playing,

#### Unit IV (8 sessions) (CO4 & L4)

Logic Concepts and Logic Programming, Prolog Programming, Expert System and Applications, Uncertainty measurement: Probability Theory, Fuzzy Set and Fuzzy Logic

#### Unit V (8 sessions) (CO5 & L2, L4)

Machine Learning Paradigms, Artificial Neural Networks, Introduction to Intelligent Agents, Natural Language Processing.

#### **Course Outcomes**

- Understand the concept of Propositional and Predicate Calculus
- Apply state space search
- Apply Recursion based search
- Perform Logic programming using Prolog
- Understand Expert Systems and fundamentals of Machine Learning.

#### **Reference Books:**

- 1. Artificial Intelligent e: Elaine Rich, Kevin Knight, Mc-Graw Hill.
- 2. Introduction to AI & Expert System: Dan W. Patterson, PHI.
- 3. Artificial Intelligent by Luger (Pearson Education)

#### 4. Russel & Norvig, Artificial Intelligent e: A Modern Approach, Pearson Education

	Prog	ramm	e Out	comes	(POs)								PSO	S	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1															
CO2															
CO3															
CO4															
CO5															

	CourseCode: OPTS1131	CourseTitle	L	T	P	S	J	C
G SERVE A		Business Research Methodology	3					3
DE CHURCH	CourseOwner	Department of Operations	Sy n	llabı	isve	rsio		1.0
	CoursePre- requisite(s)		Co	ntac	thou	Irs		
	CourseCo-requisite(s)		Da	teAp	opro	ved		
	AlternateExposure							

Research methodology is the systematic and scientific method of how to review and research a topic. It starts with identification of the problem and continues with sample design, data collection, analysis and report. It is extensively used to find a solution to a problem and enhance knowledge. Continuous growth is one of the key challenges for business, which needs innovative ideas and solutions to stagnation in growth. Research is a valuable tool for businesses to identify potential avenues for growth and solutions to problems. Understanding the methodology to be adopted when researching is, therefore very crucial for businesses.

#### **Course Objectives:**

- To enable the students to get familiarize with the concepts of Research Methodology
- To acquaint the students with the techniques of Research Methodology which are applicable to business arena

#### **UNIT-I:**

**Introduction** - Meaning, Importance of Research, Types of research, Research Process-Problem of Identification-Formulation-Classification, Concept and Construction of Hypothesis- Steps in Testing Hypothesis.

#### UNIT-II:

**Research Design** - Meaning, Purpose and Principles –Types of Research Design- Exploratory – Descriptive – Experimental; Sampling & Sampling Designs- Determination of Sample Size- Census Survey Vs Sample Survey- Advantages of Sampling.

#### UNIT-III:

**Data Collection** - Sources of Data - Methods of Data Collection, Scaling Techniques – Sampling Methods-Probability Sampling-Non Probability Sampling –questionnaire design, pilot study - Interview, Observation and Schedule; Sources of secondary data.

#### UNIT-IV:

**Data Tabulation** - Analysis and Interpretation: Editing, Decoding and Classification of Data-Preparation of Tables-Analysis of Data -Graphic and Diagrammatic Representation of Data, univariate analysis- frequency tables, mean, standard deviation, bi-variate analysis- cross tabulations, correlation and regression analysis.

#### UNIT-V:

**Research Analysis and Report Writing**: Univariate parametric and non- parametric tests, parametric tests-one sample-t test, z-test; Non-Parametric tests – Runs test, Kolmogorov Smirnov test, Chi-Square test, one sample sign test, Man Whitney U Test.Types of Reports- Contents of Reports-Presentation of Reports.

#### **Course Outcomes**

- Able to identify the important concepts of business research process
- Able to understand various types of research design and scaling methods
- Understand various types of data and methods for collecting data
- Be able to define and formulate research problems and formulate hypotheses
- Get exposure to analyse the data using various statistical techniques

### **TEXT BOOK**

Kothari, C.R. (2012), Research Methodology – Methods and Techniques, New Delhi: New Age International Publishers.

#### **REFERENCE BOOKS**

- 1. Boyd, H. W., Westfall, R. L., &Stasch, S. F. (2010), *Marketing Research: text and cases*, New Delhi: All India Travel Book Sellers.
- 2. Bryman, A. (2010), Social Research Methods, New Delhi: OxfordUniversity Press.
- 3. Krishnaswami, O.R. (2011), *Methodology of Research in Social Sciences*, Mumbai: Himalaya Publishing House.

#### JOURNALS

- 1. Electronic Journal of Business Research Methods, Cass School of Business, City University London, UK.
- 2. GITAM Journal of Management, GIM, GITAM University, Visakhapatnam
- 3. Journal of Management Research, Faculty of Management Studies, University of Delhi, New Delhi.

	Prog	Programme Outcomes (POs)											PSO	PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1																
CO2																
CO3																
CO4																
CO5																

	CourseCode: BUAN1091	CourseTitle	L	T	P	S	J	C	
		DATA ANALYSIS WITH PYTHON	3					3	
Real Providence	CourseOwner	Department of Business Analytics	Sy n	İlabı		1.0			
	CoursePre- requisite(s)		Co	ntac	thou	rs			
	CourseCo-requisite(s)		Da	teAp	pro	ved			
	AlternateExposure								

Python is an open source high level interpreter based language. Python is interactive and objectoriented language with wide range of applications. Python is commonly used in the area of data science and web-based analytics.

#### **Course Objectives**

- Understand the analytics features of python
- Get hands on experience in build data applications with python

**UNIT–I:Introduction:** Features of Python, Setting up path, Variables and Data types, Operators in Python, Input – Output Statements, Control Structures: Conditional Statements, Looping Statements, Control Statements

**UNIT–II:Data Structures of Python:** Strings, Lists, Tuples, Dictionaries, Functions: Defining and calling a function, Types of Function; Modules: Importing Module, Packages, Composition, Exception Handling. **OOP Concepts and Regular Expressions**: OOP concepts in Python, Regular Expressions: Match Function, Search Function, Matching Vs Searching, Modifiers, Patterns, Working with Database.

**UNIT–III:Python for Data Analysis - I**: NumPy Basics: Arrays andVectorized Computation, Pandas Basics: Working with Series and DataFrame; Scipy Basics: Random Variables, Building specific distributions, Univariate analysis, Bivariate and multivariate analysis.

**UNIT–IV:Python for Data Analysis– I**: Pandas for Data Analysis: I/O tools; Series, Data frames, arrys, Indexing & selecting data, Merge, Join and Concatenate; Reshaping and Pivot tables; Working with missing data; Working with numerical and categorical data.

**UNIT-V: Advanced Visualizations:** Python packages for plotting and visualizations; Introduction to Matplotlib package; Subplots, axes and figures; Text, Labels and Annotations; Managing colors; Working with lines, dates and text on plots; Scatter plots; Pie and Polar charts; Bar charts and Histograms; Plotting discrete distributions; Plotting categorical variables; Plotting images, contours and fields; Visualizations for statistics; Animations.

#### **Course Outcomes**

- Understand the language elements of Python
- Understand the OOP concepts in Python
- Write programs in python
- Use python for data analysis
- Use python for data visualization

#### **Reference Books:**

1. Starting Out with Python (2009) Pearson, Tonny Gaddis

- 2. Beginning Pyhton Wrox Publication Peter Norton, Alex Samuel
- 3. Python Algorithms Apress, Magnus Liet Hetland

	Programme Outcomes (POs)												PSO	PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1																
CO2																
CO3																
CO4																
CO5																

4. Python Object Oriented Programming PACKT Press, Dusty Phillips

	CourseCode	CourseTitle	L	Т	P	S	J	С
GITA A		OPERATIONS RESEARCH	4					4
* AL	CourseOwner	Department of Operations	Sy n	Syllabusversio n				1.0
TO BE UNIVERS	CoursePre- requisite(s)		Co	ntac	thou	rs		
	CourseCo-requisite(s)		Da	teAp	opro	ved		
	AlternateExposure							

Operations Research is a widely accepted discipline that deals with the application of advanced analytical methods to help make better decisions. This method helps to derive optimal or near-optimal solutions to complex decision- making problems. Gaining an insight into the structures and processes that Operations Research can offer and the practical utility of these techniques in Business would be an asset to the future managers.

#### **Course Objectives**

- To understand the mathematical models used in Operations Research
- To apply these techniques constructively to make effective business decisions

#### **UNIT-I:**

Introduction: Nature and meaning of Operations Research, Management applications of Operations Research, main characteristics of Operations Research, scope of Operations Research, role of Operations Research in decision making.

#### UNIT-II:

Linear Programming Problem: Introduction, mathematical formulation of LPP, general Linear Programming problem, Graphical Solution of LPP, Canonical and Standard Forms of LPP, solving LPP by Simplex Method.

#### **UNIT-III:**

Transportation & Assignment Problems: Introduction of transportation problems, procedures of finding basic feasible and optimal solution – NW corner rule, minimum cost method, Vogel's Approximation, MODI method, Assignment Problem - introduction, solving of Assignment problem by Hungarian Algorithm.

#### **UNIT-IV:**

Game Theory and Simulation: Game theory: Introduction, Two Person Zero Sum Games, Pure Strategies, Dominance Principle, Graphical; Simulation: introduction, types of simulation, generation of random numbers, Monte Carlo Simulation, and waiting lines.

#### UNIT-V:

Network Scheduling by PERT / CPM: Introduction, network and basic components, logical sequencing, rules of network construction, Critical Path Analysis, probability considerations in PERT, distinction between PERT and CPM.

#### **Course Outcomes**

- Solve Linear programming problem
- Solve Transportation and Assignment Problems
- Understand the usage of game theory and simulation for solving business problem

#### **TEXT BOOK**

Sharma, J.K. (2010), *Operations Research Theory and Applications*, New Delhi: Macmillan India limited.

#### **REFERENCES BOOKS**

- 1. Sharma, S.D. (2012), *Operations Research*, Meerut: Kedar Nath Ram Nath & Co.
- 2. Hillier. F.S., & Lieberman, G.L. (2014), *Introduction to Operations Research Concepts and Cases*, New Delhi: Tata McGraw Hill.

#### JOURNALS

- 1. GITAM Journal of Management, GIM, GITAM (Deemed to be University), Visakhapatnam
- 2. International Journal of Operations and Quantitative Management, College of Business, Prairie View A&M University, USA
- 3. Journal of Applied Statistics, Routledge, Taylor & Francis Group, UK

	Programme Outcomes (POs)												PSO	PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1																
CO2																
CO3																
CO4																
CO5																

ATAX	BUAN1101	Machine Learning	L	Т	Р	S	J	С
:1 2 1:			3					3
	Course Owner Department of Business Analytics Syllabus version							
	Course Pre- requisite(s)		Cor	ntact ho	urs			
	Course Co- requisite(s)		Dat	e Appro	oved			
	Alternate Exposure							

Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed.

#### **Course Objectives**

- 1. Understand the concepts of Machine Learning
- 2. Use a tool to implement Supervised Learning Algorithms
- 3. Use a tool to implement Unsupervised Learning Algorithms
- 4. Understand how ANN works
- 5. Understand different applications of Machine Learning

#### **Unit I: Introduction to Machine Learning**

#### No of hours: 9

Basics of Machine Learning, Categories of Machine Learning, Steps in Machine Learning, The Machine Learning process, Train and Test Data

#### **Learning Outcomes:**

•	Distinguish different categories of machine learning	L2
•	Describe the machine learning process	L2
•	Identify the steps in machine learning	L2

#### Unit II: Supervised Learning

#### No of hours: 9

Linear Regression, Logistic Regression, Decision Trees, Naïve Bayes Algorithm, K Nearest Neighbour (KNN), Random Forest, Rule based learning: Apriori Algorithm Learning Outcomes:

•	Distinguish different techniques under supervised learning	L2
•	Apply different algorithms to perform supervised learning	L3
•	Apply Apriori algorithm on a given dataset	L3
•	Build a model using supervised learning techniques	L4

#### Unit III: Unsupervised Learning

#### No of hours: 9

Clustering - K-Means Clustering, Anomaly Detection, Expectation – Maximization (EM) algorithm, Introduction to Semi Supervised and Reinforcement Learning Learning Outcomes:

Unit	IV: Introduction to Deep Learning	No of hours: 9
•	Describe reinforcement learning	L2
•	Build a model using unsupervised learning techniques	L4
•	Describe semi supervised learning	L2
•	Apply different algorithms to perform unsupervised learning	L3
•	Distinguish different techniques under unsupervised learning	L2

Concept, Artificial Neural Networks: Basic Structure of ANN, Types of ANN, Defining and Training of ANN

#### Learning Outcomes:

Uni	t V: Applications of Machine Learning	No of hours: 9
•	Apply ANN for a given data	L3
•	Build a model with ANN	L4
•	Describe how ANN works	L2
٠	Describe the concept of deep learning	L2

Sales and Marketing, Financial Services, Social Media Management, Self Driving Cars, Fraud Detection

#### **Learning Outcomes:**

•	Explain the machine learning application in sales and marketing	L2
•	Explain the machine learning application in financial services	L2
•	Describe how self driving cars works	L2
•	Describe how machine learning can be used for fraud detection	L2
•	Describe machine learning applications for social media management	L2

#### **Course Outcomes**

- 1. Distinguish different categories of machine learning
- 2. Build a model using supervised learning techniques
- 3. Build a model using unsupervised learning techniques
- 4. Describe the concept of deep learning
- 5. Explain different machine learning application

#### Reference

- 1. Saikat Dutt, Subramaniyam Chandramouli, Amit Kumar Das, Machine Learning, Pearson Education
- 2. Alpaydin Ethem, Introduction to Machine Learning, Prentice Hall of India
|     |   | Programme Objectives (POs) |   |   |   |   |   |   |   |    |    |    | ] |   |   |  |
|-----|---|----------------------------|---|---|---|---|---|---|---|----|----|----|---|---|---|--|
|     | 1 | 2                          | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 |  |
| CO1 | 1 | 1                          | 2 | 2 | 2 | 3 |   |   |   |    |    |    |   |   |   |  |
| CO2 | 1 | 1                          | 2 | 2 | 2 | 3 |   |   |   |    |    |    |   |   |   |  |
| CO3 | 1 | 1                          | 2 | 2 | 2 | 3 |   |   |   |    |    |    |   |   |   |  |
| CO4 | 1 | 1                          | 2 | 2 | 2 | 3 |   |   |   |    |    |    |   |   |   |  |
| C05 | 1 | 1                          | 2 | 2 | 2 | 3 |   |   |   |    |    |    |   |   |   |  |

GITA A	Course code: BUAN1111	Database Management Systems	L	Т	Р	S	J	C
8 3 5			3					3
	Course Owner	Department of Business Analytics	Syl	yllabus version		1.0	)	
	Course Pre-requisite(s)		Co	ntact	t hou	irs	45	
	Course Co-requisite(s)		Da	te A	ppro	ved		
	Alternate Exposure							

Each and every organization maintains database related to their business such as employees, customers, products, sales and so on. Database management system is collection of programs that enables to store, modify and extract information from a database. SQL is the *de facto* language for communication with the database and MS Access is a simple and a popular DBMS package from Microsoft which provides the database features in GUI format.

# **Course Objectives**

- 1. Understand different concepts in DBMS
- 2. Create database in MS Access
- 3. Write queries in SQL
- 4. Write programs in PL/SQL
- 5. Understand the concept of transaction management in DBMS

#### Unit – I: Database approach

# No of Hours:9

Features of database approach, advantages and disadvantages, Components of DBMS, Data Models - Hierarchical, Network, Relational, ER analysis, Attributes and Domains, Integrity Constraints and Keys, Normalization – INF, 2NF, 3NF

#### **Learning Outcomes**

<b>Unit</b> - Creati	- II: Working with MS Access ng Tables, Data Types and Fields properties in MS Access,	<b>No of Hours:9</b> Creating Relationsh
•	Distinguish different database models	L2
•	Create ER diagram for a given problem	L3
•	Perform normalization of a given database	L4
•	Distinguish different integrity constraints and keys	L2
•	List out the components of DBMS	L1

ips, Designing ( Forms for Data Entry, Queries in MS Access - Simple queries, Cross-tab queries, Reports in MS Access - Simple reports, cross tab reports - using report wizard, using query design

# **Learning Outcomes**

•	Create tables in MS Access	L3
•	Build relationship between tables in MS Access	L3
•	Design forms in MS Access	L3
•	Generate reports in MS Access	L3
•	Perform queries in MS Access	L3

# **Unit – III: Working with SQL**

#### No of Hours:9

DDL statements - Create, Drop, Alter, DML statements, Insert, Select, Delete, Update, Oracle Functions, Join Condition, Set Operators, The Order By Clause

# **Learning Outcomes**

•	Use DDL statements on a database	L3
•	Use DML statements on a database	L3
•	Perform queries with join operations	L4
•	Perform queries using aggregate functions	L4
•	Perform queries using order by clause	L4

# **Unit – IV: Working with PL/SQL**

#### No of Hours:9 Control Structures, PL/SQL Block, Cursors, Procedures, Functions, Triggers

# **Learning Outcomes**

•	Write a PL/SQL block	L3
•	Use control structures in PL/SQL block	L3
•	Create stored procedures for a database	L4
•	Create user defined functions for a database	L4
•	Create triggers for a database	L4

#### **Unit – V: Query Processing and Optimization** No of Hours:9

ACID properties, Transaction Processing and Concurrency Control - Database Recovery. **Learning Outcomes** 

•	Describe the properties of ACID transactions	L2
•	Distinguish different ways to do concurrency control	L2
•	Describe the transaction processing	L2
•	Identify different ways of performing database recovery	L1

#### **Course Outcomes**

- 1. Explain different concepts of DBMS
- 2. Create database in MS Access
- 3. Perform queries in SQL
- 4. Write a PL/SQL program
- 5. Describe the properties of ACID transactions

# **Reference Books:**

- 1. Abraham Silberschatz, Henry F Korth, Database System Concepts, McGraw Hill Education
- 2. Hoffer Jeffrey, V. Ramesh, Topi Heikki, Modern Database Management, Pearson
- 3. Andrew Couch, Microsoft Access Plain & Simple

		<b>Programme Objectives (POs)</b>											]			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1	0	2	2	1	1								3	3	3	
CO2	0	2	2	1	1								3	3	3	
CO3	0	2	2	1	1								3	3	3	
CO4	0	2	2	1	1								3	3	3	
CO5	0	2	2	1	1								3	3	3	

GITA	Course code: BUAN1121	<b>Business Analysis</b>	L	Т	Р	S	J	С
2			3					3
	Course Owner	Department of Business Analytics	Syllabus version			sion	1.0	
	Course Pre-requisite(s)		Co	ntact	hour	s	45	
	Course Co-requisite(s)		Da	te Ap	prov	red		
	Alternate Exposure							

Business Analysis is the process of enabling change in an organization by understanding its needs and recommend solutions to achieve the organization goals. Business Analyst helps in achieving this task by leveraging the technology with business functions and organizational needs.

### **Course Objectives**

- 1) Understand the competencies of a Business Analyst
- 2) Understand the investigation techniques for requirements analysis
- 3) Use Process modeling tools to define the requirements
- 4) Draw use case diagrams
- 5) Understand the structure of a business case

# UNIT - I Title Introduction to BA

Concept, Business Analysis maturity model, Role and responsibilities of Business Analyst, Competencies of a business analyst, Project Definition and Scoping: Aspects of project, Defining objectives and scope, Identifying stakeholders, Project phases and deliverables, Project approaches -Waterfall, Agile, Iterative, Incremental

No of Hours : 9

L2

# Learning Outcomes:

After completion of this unit, the student will be able to

- Identify the responsibilities of a Business Analyst L2
- Describe the project management phases
- Distinguish different project management approaches
  L2
- Evaluate the approach to use for a given business problem L5

Pedagogy tools: Blended learning, Case let, video lectures, self-reading

# UNIT - II Title Elicitation: No of Hours : 9

Investigation techniques - Interviewing and Fact Finding, Gathering Requirements – Requirements engineering, Requirements elicitation, Requirement analysis, Types of requirements – Functional and non-Functional, Documenting requirements

# Learning Outcomes:

After completion of this unit, the student will be able to

٠	Identify different requirement gathering techniques	L2
•	Evaluate the method to be adopted to elicit different types of information	L5
•	Distinguish different requirement documentation methods	L2
•	Classify different types of requirements	L2

UNIT - IIITitle Process ModelingNo of Hours : 9Examining business process model, Business Process Model and Notation (BPMN), Process Modeling<br/>as requirements definition tool. Data Modeling: Concept, Entity relationship diagrams, Identify and<br/>define attributes

# **Learning Outcomes:**

After completion of this unit, the student will be able to

•	List out different symbols in BPMN		L1
•	Describe a requirements in terms of process model		L3
•	Develop a swimlane diagram for a given problem		L3
•	Identify database required for a given problem		L2
•	Develop a ER diagram for a given problem	L3	

Pedagogy tools: Blended learning, Case let, video lectures, self-reading

# UNIT - IVTitle Ensuring Requirements QualityNo of Hours : 9Development of Use Cases and scenarios, Requirements QualityCriteria, Managing Delivery:Delivering the solution, Delivery lifecycles, Deliverables, Techniques,

Learning Outcomes: After completion of this unit, the student will be able to

0	1		
•	List out different symbols in use case		L1
•	Describe a requirements in terms of use case	L3	
•	Develop a use case diagram for a given problem		L3
•	Distinguish different delivery lifecycles	L2	

Pedagogy tools: Blended learning, Case let, video lectures, self-reading

# UNIT - V Title Making Business and Financial Case No of Hours : 9

Business case in project lifecycle, Identifying options, Feasibility study, Structure of business case, Investment appraisal, Presentation of business case, Benefits management and realization.

# Learning Outcomes:

After completion of this unit, the student will be able to

•	Explain the importance of business case	L2
•	Identify the structure of a business case	L2
•	Distinguish different types of feasibility study	L2
•	Distinguish different tools in feasibility study	L2
•	Evaluate a problem in terms of cost / benefit analysis	L5
		L1

#### **Pedagogy tools:** Blended learning,Case let, video lectures, self-reading

#### **Course Outcomes**

- 1. Identify the responsibilities of a Business Analyst
- 2. Identify different requirement gathering techniques

- 3. Describe a requirements in terms of process and ER model
- 4. Describe a requirements in terms of use case
- 5. Explain the importance of business case

#### Textbook(s):

1. Cadle James, Eva Malcom, Hindle Keith, Paul Debra, et al., *Business Analysis*, United Kingdom: BCS, The Chartered Institute for IT

# **Additional Reading**

# **Reference Book(s):**

- 1. Pendse Pradeep Hari (2015), Business Analysis : Solving Business Problems By Visualizing Effective Processes and It Solutions, New Delhi : Prentice Hall of India.
- 2. Paul Mulvey, Kate Mcgoey, Kupe Kupersmith (2013), *Business Analysis for Dummies*, New Delhi : Wiley India.

				Prog	gramme	e Obje	ectives	s (POs	5)				PSOs			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
CO1	2	0	0	0	0	3										
CO2	2	0	0	0	0	2										
CO3	2	0	0	1	0	2										
CO4	2	0	0	1	0	2										
CO5	2	0	0	0	0	3										

1-Low, 2- Medium and 3- High Correlation

	CourseCode:	CourseTitle	L	T	Р	S	J	C
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G serve VI		WEB ANALY IICS	3	1 1				3
	CourseOwner	Department of Business	Syllabusversio					1.0
		Analytics	n					
O RE UNIVE	CoursePre-		Co	ntac	thou	rs		
Contraction of the local division of the loc	requisite(s)							
	CourseCo-requisite(s)		Da	teAp	pro	ved		
	AlternateExposure							

The World Wide Web along with social media produces huge amount of data every day. This data may provide lot of insight on not only the user's usage behavior but his/her tastes, preferences and thoughts. Web Analytics is a field in data analytics that will help in understanding user's attitudes and characteristics and help a business in targeting the potential customer.

# **Course Objectives**

- Understand the concept of web analytics
- Understand clickstream and emerging analytics like social, mobile and video
- Understand the application of web analytics metrics

**Unit I: (8 sessions) (CO1, L2) Introduction to Web Analytics:** Concept of web analytics, Importance and benefits of Web Analytics, Selecting a web analytic tool, Web Metrics – Visits and Visitors, Time on page and Time on site, Bounce Rate, Exit Rate, Conversion rate, Engagement, Attributes of metrics, Strategic elements related to web metrics – diagnosing root cause, leveraging customer reports, macro view of the site's performance

# Unit II: (8 sessions) (CO2, L3) Clickstream Analysis and KPI's:

Understanding the web metrics of a web site, Producing web analytics report, Foundational Analytical strategies – Segmentation, Focus on Customer Behaviour, Different Clickstream Analysis, Web analytics challenges, Actionable outcome KPIs, understanding the conversion rates, measuring macro and micro conversions, quantifying economic value, measuring success for non – economic website

**Unit III: (8 sessions) (CO3, L3)** Leveraging Qualitative Data, Testing and Experimentation: Lab Usability Studies, Usability Alternatives, Surveys, Web-enabled emerging user research options, Testing – A/B Testing, Multivariate Testing, Actionable Testing ideas, Controlled Experiments, Creating and Nurturing a testing culture, Competitive Intelligent Analysis – CI data sources, types and secrets, web traffic analysis, search and keyword analysis

**Unit IV: (8 sessions) (CO4, L3) Emerging Analytics:** Social Analytics – Data challenge, content democracy evolution, twitter revolution, analyzing offline customer experiences, analyzing mobile customer experiences, Measuring the success of blogs, Quantifying the impact of Twitter, Analysing performance of videos, Hidden web analytics traps – accuracy or precision, Dealing with data quality, Building action dashboard, Nonline marketing opportunity and multichannel measurement, Behaviour Targeting, Challenges in Online data mining and Predictive Analytics

Unit V: (8 sessions) (CO5, L2) Principles of an Analyst: Understanding the context, Comparing KPIs over time, measuring latent conversions, understanding the search analytics, Multitouch Campaign Attribution Analysis, Multichannel Analytics.

# **Course Outcomes**

- Understand the usage of different metrics for web analytics
- Perform clickstream analysis
- Perform web analytics
- Perform Social Analytics
- Understand the principles of an Analyst

### **Reference Books:**

1. Clifton B., Advanced Web Metrics with Google Analytics, Wiley Publishing, Inc.2nd ed.

2. Kaushik A., Web Analytics 2.0, The Art of Online Accountability and Science of Customer Centricity, Wiley Publishing, Inc. 1st ed.

3. Sterne J., Web Metrics: Proven methods for measuring web site success, John Wiley and Sons

	Prog	Programme Outcomes (POs)													
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1															
CO2															
CO3															
CO4															
CO5															

	CourseCode:	CourseTitle	L	Т	Р	J	S	С
PERFECT		STATISTICAL QUALITY CONTROL AND SIX SIGMA	3					3
TO BE UNITE	CourseOwner	Department of Operations	Sy n	llabu	sversio			1.0
	CoursePre-		Co	ntac	tacthours			
	requisite(s)							
	CourseCo-requisite(s)		Da	teAp	pro	ved		
	AlternateExposure							

Statistical quality control refers to the use of statistical methods in the monitoring and maintaining of the quality of products and services.SQC is used to analyze the quality problems and solve them. Six sigma measures the quality of business performance for processing a product. Business score card emphasize on the implementation of measurement system so that it can be used to write business performance.

# **Course Objectives**

- To enable the students to understand and diagnose the levels or standards that depends on many factors and lack of quality while processing the end products.
- To enable them to evaluate various options in reaching financial decisions, whether personal or business- related.

# UNIT-I:

Introduction to control charts, process and product control, control charts, 3 control limits, tools for

 $\sigma$  statistical quality control, creating control charts forvariable.

# **UNIT-II:**

Construction of control charts for attributes, p-chart for fraction defective, d-chart for number of defective, interpretation of p-chart. Control charts for number of defects per unit:limits for c-chart, c-chart for variable sample size or u-chart, application c-chart and Natural tolerance limits and

specification limits.

# **UNIT-III:**

Acceptance sampling by attributes- acceptance quality level, lot tolerance proportion or percent defective, process average fraction defective, consumers risk, producers risk, rectifying inspection plans, average outgoing quality limit, O.C curve, single sampling plan, double sampling plan and sequential sampling plan.

# **UNIT-IV:**

Six sigma- Basics of six sigma, traditional approach of six sigma, break through approach to six sigma-measure, variation, cost of quality, six sigma measurements, Analyze, improve control: challenges in implementing six sigma.

# **UNIT-V:**

Elements of six sigma business score card: Leadership and profitability, Management and improvement, Employees and innovation, Purchasing and supplier management, Operational execution, Sales and distribution, Service and growth, Six sigma business score card and measurements, Business performance index, Corporate DPU and DPMO, Corporate sigma level.

# **Course Outcomes**

- Create control charts for a given problem
- Understand the factors to look out for quality acceptance
- Understand the elements of six sigma business score card

#### Note

1. This paper is without a case study.

# **TEXT BOOKS**

- 1. S.C.Gupta and V.K. Kapoor, Fundamentals of Applied Statistics, Sultan and Chand, New Delhi, 2017.
- 2. Praveen Gupta, Six Sigma Business Score card, Tata McGraw-Hill Publishing company limited, New Delhi, 2017

# **REFERENCE BOOKS**

- 1. Gupta and Kapoor ,Fundamentals of applied statistics, Sultan and Chand,2017
- 2. Pathak and F. Resh ,Demographic Methods, Sultan and Chand,2017
- 3. G. Harver, Lean Six Sigma For Beginners, A Quick-Start Beginner's Guide To Lean Six Sigma, Kindle Edition.
- 4. Daniel J. Zrymiak, GovindarajanRamu, Roderick A. Munro, The Certified Six Sigma Green Belt Handbook, 2nd Edition (With 2 CD- ROMs) Hardcover – 2015
- 5. Thomas Pyzdek, Paul Keller, The Six Sigma Handbook Hardcover 30 Aug 2010

# JOURNALS

- 1. International journal of science and research
- 2. International journal of six sigma and competitive advantage
- 3. International Journal of Six Sigma and Competitive Advantage RG

- 4. International journal for quality and research
- 5. International Journal of Business AdministrationInsurance Watch, GurgaonInsurance Plus, Mumbai.

	Prog	ramm	e Outo	omes	(POs)								PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1															
CO2															
CO3															
CO4															
CO5															

	CourseCode: BUAN1141	CourseTitle	L	Т	Р	S	J	C
GI SERVE		<b>BIG DATA ANALYTICS</b>	3					3
* ALI	CourseOwner	Department of Business Analytics	Sy	llabus		1.0		
TO BE UNIVER	CoursePre- requisite(s)	ours						
	CourseCo-requisite(s)		Da	teApp	rove	d		
	AlternateExposure							

Big data is a term used to describe a massive amount of structured and unstructured data collected over the years from different sources. Analysis of such data may provide great insights for a business. However, traditional data management functions are not capable for handling such data and requires specialized tool. Hadoop is a popular platform for carrying out big data analytics

# **Course Objectives**

- To acquaint the students with the concepts of big data
- To provide hands on experience in working with Hadoop

UNIT-I: Introduction to Big Data: Concept, Features of big data, big data challenges, Hadoop and its features, Hadoop Ecosystem, Hadoop Components, Hadoop Architecture, Hadoop Cluster, Hadoop Storage: HDFS

**UNIT–II: Hadoop Mapreduce:** Concept, YARN components, YARN architecture, YARN mapreduce application execution flow, YARN workflow, Java for Mapreduce programming; Mapreduce examples; Mapreduce for data analytics: analyzing numerical and categorical data sets; Mapreduce for statistical analysis; Hadoop streaming.

**UNIT-III: Apache PIG:** PIG Components & Execution, PIG data types, Data models in PIG, Programming in PIG.

**UNIT-IV: APACHE HIVE&HBase:** Introduction, Architecture and components, data types and data models, HIVE partitioning and bucketing, HIVE tables, HIVE QL: joining tables, dynamic partitioning. Introduction, Architecture and components, Run modes, configuration, data models, HIVE data loading techniques,

**UNIT – V: Introduction to Apache Spark:** Interactive analysis, RDD programming; Spark SQL, Data sets and DataFrames; Basics of MLib and GraphX.

#### **Course Outcomes**

- Understand the concept of big data and the process of big data analytics
- Write programs in Hadoop Mapreduce
- Write programs in APACHE PIG
- Work with APACHE Hive
- Understand the components in APACHE HBase

#### **Reference Books**

- 1. Mike Frampton, "Mastering Apache Spark", Packt Publishing
- 2. TomWhite, "Hadoop: TheDefinitiveGuide", O'Reilly, 4thEdition
- 3. NickPentreath,MachineLearningwithSpark,PacktPublishing
- 4. Mohammed Guller, Big Data Analytics with Spark, Apress
- 5. Donald Miner, Adam Shook, "Map Reduce Design Pattern", O'Reilly

	Prog	ramm	e Outc	omes	(POs)								PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1															
CO2															
CO3															
CO4															
CO5															