S-01 & 02 June, 2016 AC after Circulars from Circular No.100 & onwards

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY

CIRCULAR NO. SU/Service Course/30/2016

It is hereby inform to all concerned that, the Choice Based Credit and Grading System have been implemented to the affiliated colleges from the academic year 2015-16 at Post Graduate level for the all Faculties. According to the guidelines of C.B.C. & G.S. it is essential to teach the Service Course to students. The authorities of the university has decided that the service courses run at University Campus and Sub-Center, Osmanabad be apply to the college level. The concerns are inform that to instruct to the students to Choice any one Service Course as per their willingness. Where only one post graduate course they can take the service course of the concerned subject. The syllabi of the service courses are uploaded with the circular on the University website www.bamu.ac.in

The service courses be teach to the students with the syllabus of IVth-Semester for this year only and hereafter to tech with the syllabus of III-Semester as per their relevant courses.

This is effective from the academic year 2016-17.

All concerned are requested to note the contents of this circular and bring notice to the students, teachers and staff for their information and necessary action.

University Campus,
Aurangabad-431 004.
REF. NO. SU/Service Course /
SYLLA./2016/5117-516
Date:- 02-09-2016.

Copy forwarded with compliments to:-

1] The Principals of concerned Colleges,
Dr. Babasaheb Ambedkar Marathwada University.

Copy to :-
1] The Controller of Examinations,
6] The Section Officer, [ M.A. Unit ],
7] The Section Officer, [ M.Sc. Unit ],
8] The Section Officer, [ M.Com. Unit ],
9] The Section Officer, [ Management Unit ],
10] The Section Officer, [ Professional Unit ],
11] The Section Officer, [ Engineering Unit ],
3] The Programme [ Computer Unit-1] Examinations,
4] The Programme [ Computer Unit-2] Examinations,
5] The Public Relation Officer,
6] The Co-ordinator, E-Suvridha Kendra, [Rajarshi Shahu Maharaj Pariksha Bhavan,
7] The Record Keeper,
Dr. Babasaheb Ambedkar Marathwada University,
M.Sc. Computer Science

Service Course

[ Academic Year 2016-17 & onwards ]
Service Courses:

- The student should opt service course of 4 credits either from parent department or from other department.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>No. of Credits</th>
<th>No. of Hrs./Week</th>
<th>Internal</th>
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<td>Introduction to MATLAB</td>
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<td>Web Developments</td>
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<td>Android Programming</td>
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Service Course - I

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<td>4 HRS (TH/Week)</td>
<td>(Semester/Term Exam)</td>
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Course Objective:
1. To make the students aware of the importance of grammar and vocabulary in written and spoken communication which will lead to enhance interpersonal and social interaction.
2. To enable them to reflect and improve on their communicative behavior.
3. To train them to use language effectively to face interviews, group discussions and public speaking.

Prerequisite:
It is just assumed to have the basic knowledge of English language with an urge to develop it more effectively.

At Course Completion:
The student will be able to improve his writing and reading skills and will be having improved clarity of communication.

Course Outline

Unit-1:
Effective Communication: Concept and meaning of communication, types of communication, attributes of effective communication, barriers to effective communication.
Tools of English: Spoken Vs. Written communication, Basic Grammar: parts of speech: Noun, Pronoun, Verb, Adjectives, Adverbs, prepositions, Conjunction and Interjection.

Unit-2:
Skill Enhancement:
Listening Skills: Understanding assignments to resolve problems and answer questions to understand the hidden meaning what people say.
Presentation Skills: Components of good presentation, group dynamics, speeches.
Fifteen principles to increase clarity of communication, effective speaking guidelines, pronunciation etiquettes.
Body language: Importance, concept, nine emotions displayed through body language, zones of intimacy and desirable/undesirable body language in professional institutes.

Unit-3:
Technical Communication:
Writing of memos, e-mail, letter writing, business letters, cover letters, social and goodwill letters, adjustment letters, bank and insurance letters, resumes, memos e-mail etiquettes, reports, basics of report writing, technical proposal and comprehension.

Unit-4:
Career Skills: Applying for job, interviews, types of interviews, group discussions, key steps to succeed in group discussion, resume profiling, strategy of resume writing, difference between a resume and curriculum vitae.
Unit-5:

**Soft skills:** Classification of soft skills, Communication and networking, Empathy (Understanding other person's view), Intrapersonal skills, Interpersonal skills, Negotiation skills.

**Books:**
- Effective Communication by Urmila Rai and S.M.Rai.

**Reference Books:-**
1) "Communication skills" by Meenakshi Raman and Sangeeta Sharma
2) "Technical Communication-Principles and Practice" by Meenakshi Raman and Sangeeta Sharma.
3) Personality Development and Soft Skills by Barun K.Mitra

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<th>Course Code</th>
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<th>Course Title</th>
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**Course Objective:**
To make student competent for cracking the Aptitude papers at the entry point of their careers.

**Prerequisite:**
To be registered PG student of any faculty, any stream from our University

**At Course Completion:**
The students will gain following points after completion of course
- The personality development programmes will groom their overall personality.
- Will experience positive attitude in his life
- Rise in Confidence level

**Course Outline**

**Unit - 1:**
*Interpersonal Skills*: Introduction to Interpersonal Relations, Analysis of Life position.

**Unit - 2:**
*Stress Management*: Introduction to Stress Causes of Stress, Impact Management Stress, And Managing Stress.
*Group Dynamics & Team Building*: Group Dynamics, Importance of groups in organization, Team Interactions in group, How to build a good team?

**Unit - 3:**
*Personality Development*: Inner Personality Development, Role of motivation & body language, Filling the GAP- Grooming, Attitude, Personality.
*Business Writing*: Use of Simple structure while writing, Apply a positive tone in business communication.

**Unit - 4:**
Time Management: Time as a Resource, Identify Important Time, Management Wasters, Techniques for Better Time Management.

Role-Plays: Real-life Conversation Practice, Develop an ability to converse fluently and confidently in all kinds of situations, To identify characteristics of different personality styles, passage Reading.

Unit - 5:

Motivation: Introduction to Motivation, Relevance and Types of Motivation.

Creative Thinking: Express creativity in everyday situations, Know the creative thinking process, and Develop a positive attitude.

Recommended Books
2. Collins Cobuild English Grammar.

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</table>

Course Objective:
To make student competent for cracking the Aptitude papers at the entry point of their careers.

Prerequisite:
To be registered PG student of any faculty, any stream from our University.

At Course Completion:
Students Fluid and crystallised intelligence will be boosted.
This will help students to:
- effective problem-solving skills
- ability to quickly learn new skills
- ability to quickly integrate new information
- strategic thinking
- ability to deal with ambiguity in decision making

Course Outline

Unit-1:
English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning, and verbal deduction.

Unit-2:
General Mental Ability, include Verification of Truth of the Statement, Assertion And Reason, Alpha Numeric Sequence Puzzle, Direction Sense Test, Series Completion, Inserting The Missing Character, Logical Sequence Of Words, and Logical Venn Diagrams.
Unit-3:
Logical Deduction, the chapters include Cause And Effect Reasoning, Statement-Conclusions, Theme Detection, Statement-Arguments, Deriving Conclusions From Passages, Logic, Statement-Assumptions, and Statement-Course Of Action.

Unit-4:
Construction Of Squares And Triangles, Classification, Figure Formation & Analysis, Series, Completion Of Incomplete Pattern.

Unit-5:
Paper Folding, Analogy, Analytical Reasoning, Cubes And Dice, and Spotting Out The Embedded Figures, Mensuration (2D and 3D), Data Interpretation, Sources, acquisition and interpretation of data, Graphical representation and mapping of data.

Books:
1. A Modern Approach To Verbal & Non-Verbal Reasoning book by RS Aggarwal,
2. Quantitative Aptitude For Competitive Examinations by Abhijit Guha
3. Course in Mental Ability and Quantitative Aptitude by Edgar Thorpe

Reference Books:
1. A Modern Approach To Verbal Reasoning by R.S. Aggarwal
2. Data Interpretation & Data Sufficiency By B S Sijwali
3. Analytical Reasoning By M K Pandey

Service Course - II

<table>
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<th>Course Code</th>
<th>Course Title</th>
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Course Objective:
To provide the general basic flavor of MATLAB Environment to the students so that they can apply it for their specific domain.

Prerequisite:
Basic knowledge of any programming environment.

At Course Completion:
Students can develop good GUI based application to solve their mathematical, statically or any data processing applications in MATLAB.

Course Outline
Unit-1:
Starting with MATLAB: Introduction, Development Environment, MATLAB search path, Typing Commands, Variables and Numbers, Vectors and Matrices
Unit-2:
**Data Types, Operators & Control Statements:** Introduction, Data Types, Operator, Flow Control Statements.
**M-file Programming:** Introduction, Program Development, M-file programming, M-file Types, Function Arguments, Function Types, Function Handle, P-Code, MATLAB Expression and Regular Expression, Error Handling.

Unit-3:
**Advanced capabilities in MATLAB:** Introduction, Cell Array, Structure, Sparse Array
**Mathematics:** Introduction, Matrices, Linear Equation, Factorization, Eigenvalues, Polynomial, Interpolation, Data Analysis, Polynomial Regression, Fourier Approximation, Integration and Differentiation, Differential Equation.

Unit-4:
**Graphics:** Introduction, 2-D Plotting, Plot style option, How to edit plot, Basic Statistics of the Graph, The Plots Creating, Animation, Graphics Object Handling, 3-D visualization.
**Graphical User Interface:** Introduction, GUI layout tools, Dialog box, List Box, Accessing variables from workspace, GUI Components, Solved Example.

Unit-5:
**Application Program Interface (API) or External Interfaces:** Introduction, Import and Export Data, Low level File I/O Functions, Calling C-programs from MATLAB, Calling Java from MATLAB.

**References:**
1. [www.mathworks.com](http://www.mathworks.com) (MATLAB Toolbox)

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<th>Course Code</th>
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<th>Web Developments</th>
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Course Objective:
This course will provide an opportunity lean concepts related to web site design. Student will be exposed with design of static as well as dynamic web sites based on HTML/DHTML environments.

Prerequisite:
Student should have an experience of using internet.

At Course Completion:
student will be able to design web site by his/her own.

Course Outline

Unit-1:
Introduction: WWW, Components of WWW, Domain, Host, Hosting Platforms, Development Environments, Website, Web pages, Multimedia contents, How to own and register a web site, Server Side Development technologies, Client Side Development Technologies in Web

Unit-2:
Web page design using HTML: Introduction (Header, Data rows, The Caption Tag); Using the Width and Border Attribute; Using the Cell padding Attribute; Using the Cell spacing Attribute; Using the BGColor Attribute; Using the COLSPAN and ROWSPAN Attributes Linking Documents: Links (External Document References, Internal Document References); Images as Hyperlinks (Image Maps). Frames: Introduction to Frames (The tag, The tag, Targeting Named Frames. DHTML: Cascading style sheets, Style tag.

Unit - 3:

Unit-4:
Introduction to VB Script, Adding VBScript code to HTML page, VBScript Data type-Variant subtypes, VBScript Variables: (Declaring variable, Naming restrictions, Assigning value to variables, Scalar variables and Arrays), VBScript Constants, VBScript Operators, and Operator precedence; Message Box: functions of message box (Prompt, Buttons, Title, HelpLine, Context), Return values of MsgBox function, button argument setting. Conditional statements: If. Then. Else, Select case; Loops: Do loops, While.. Wend, For.. Next, For. Each..Next; VBScript variables: Sub procedures, Function procedures; Using VBScript with HTML form controls, Data handling functions, String functions, Date and Times functions;

Unit-5:
Working with Cookies, Java Scripts: What is JavaScript, Uses of JavaScript, Writing JavaScript, Variables, Functions, Objects, Properties, Methods, Write to a Document, Open a Window Events and Objects, Image Rollovers

Reference Books:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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Objective:
To provide the emulator based environment training to develop the mobile apps.

Prerequisite:
Basic knowledge of any programming environment.

At Course Completion:
Students can absorb in Android Mobile Apps development industries or they can start their own apps development business.

**Course Outline**

**Unit-1:**  

**Unit-2:**  

**Unit-3:**  
**Resources Organizing & Accessing:** Alternative Resources, Accessing Resources.  
**Intents and Filters:** Intent Objects, Action, Android Intent Standard Actions, Data, Category, Extras, Flags, Component Name, Types of Intents: Explicit Intents, Implicit Intents.

**Unit-4:**  
**UI Layouts:** Android Layout Types, Relative Layout Attributes, Grid View Attributes, Sub-Activity, Layout Attributes, View Identification, UI Controls, Android UI Controls, Text View Attributes, Auto Complete Text View Attributes, Button Attributes, Image Button Attributes, Check Box Attributes, Toggle Button Attributes, Radio Button Attributes, Radio Group Attributes.

**Unit-5:**  
**Event Handling:** Event Listeners & Event Handlers, Event Listeners Registration, Styles and Themes, Defining Styles, Using Styles, Style Inheritance, Android Themes, Default Styles & Themes, Custom Components, Creating a Simple Custom Component.

**Reference:**

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**Unit-1:**  
**Introduction**
Meaning, Concept, nature steps types and characteristics of research, Identification & formulation of Research Problem, Hypothesis, Research Design & Research Ethics.

**Review of literature**
Need for Reviewing Literature, what to Review and for what purpose, Literature search Procedure, Sources of Literature, Planning of Review work, Note Taking.

**Unit-2:**  
**Types and Methods of Research**
Classification of Research, Pure and Applied Research, Exploring or Formulative Research, Descriptive Research, Diagnostic Research / Study, Evaluation Research / studies, Action
Research, Experimental Research, Analytical study of statistical Method, Historical Research, Surveys, Case Study, Field Studies.

Unit-3:
Development of research proposal
Research proposal and its elements, Formulation of research problem - criteria of sources and definition, Development of objectives and characteristics of objectives, Development hypotheses and applications.

Unit-4:
Methods & tools of data collection:
Concept of sampling and other concepts related to sampling. Probability and non - probability samples, their characteristics and implications. Tools of data collections, their types, attributes and uses. Redesigning, research tools - like questionnaire, opinion, observation, interviews, scales and tests etc.

Field Work
The Nature of Field Work, Selection and Training of Investigators, Sampling Frame and Sample Selection, Field Operation, Field Administration.

Unit-5:
Methods of data analysis:
Editing, Classification and Coding, Transcription, Statistical Analysis, Measures of Central Tendency Measures of Dispersion, Measures of Association / Relationship, Regression and Correlation Analysis, Hypothesis Testing (For Proportion and Means), Test of Significance.

Report writing and evaluations:

References:
1) Baiapai S. R., (1975), Methods of Social Survey and Research, Kitabghar, Kanpur.