MATS UNIVERSITY

NAAC GRADE A+ ACCREDITED UNIVERSITY

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CHHATTISGARH'S FIRST AND ONLY STATE UNIVERSITY
ACCREDITED WITH A+ GRADE BY NAAC

MATS CENTRE FOR DISTANCE AND ONLINE EDUCATION (MCDOE)

ODL MODE

PROGRAMME GUIDE

MATS CENTRE FOR OPEN AND DISTANCE EDUCATION (MCODE)

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION (PGDCA)

- About University
- About Programme
- Examination Scheme
- Fee Structure
- Detailed Syllabus
- Counseling and Study Structure
- Study Modules
- Date Schedule & Instructions for Submitting Assignments
- Guideline For Preparation of Dissertation Report

MATS CENTER FOR DISTANCE AND OPEN AND DISTANCE EDUCATION(MCDOE)
MATS UNIVERSITY

Address: Aarang-Kharora Highway, Gullu, Aarang, Raipur, Chhattisgarh

Pincode-493 441, Contact: 07714078995/96

ABOUT UNIVERSITY

At MATS, we are committed to developing leaders who are not merely skilled professionals but also compassionate people with strong ethical values and discipline.

We provide our students with the **information, skills, confidence,** and **experience** necessary to improve the world around them. MATS University not only develops their students individually but also gives them time and opportunity to develop new interests, learn new skills, and meet new people.

Established in **2006**, MATS University has emerged as a leading educational institute in Raipur, committed to nurturing future leaders and professionals across various disciplines. We take pride in our distinguished faculty members who are experts in their respective roles, dedicating themselves to imparting knowledge and mentorship to our students.

Key Features of University: Following are some of the key features which makes university unique in terms of quality and reliability.

- It State-of-the-Art Facilities: Advanced classrooms and labs for enhanced learning.
- Sustainability: Green buildings and eco-friendly practices.
- Technology Integration: Smart classrooms and digital resources for better education.
- Experienced Professors: Academic and practical expertise that enriches the learning environment.
- Research & Development: Active involvement in cutting-edge research.
- Personalized Learning: Smaller class sizes and mentorship for more interaction and attention.
- Inclusivity & Diversity: Celebrating different backgrounds and perspectives: Student Engagement: Clubs and events that create a lively campus life. Support Services: Comprehensive help for academic and personal growth.

University Vision: To become a world-class Centre in providing globally relevant education. MATS will be the Global University, known for the quality academic programmes and outstanding faculty, products and services to student and clients independent of place and time constraints. MATS University will be a benchmark institution for lifelong partnership with students, the workforce and public and private enterprises. Building on its proud tradition, MATS university will extend educational opportunities to those who will make our

state (Chhattisgarh), our nation and global society a better place to live and work.

University Mission: To foster an intellectual and ethical environment in which the spirit and skills within MATS will thrive so as to impart high quality education, training, research and consultancy services with a global outlook and human values. To create and develop technocrats, entrepreneurs and business leaders who will strive to & improve the quality of human life. To create truly world class schools of Management Sciences, Engineering Sciences, Information Technology, Life Science, Basic and Applied Sciences, Humanities & Social Sciences and Life Skills.

RECOGNITIONS

- The University is recognized under Section 2(f) of the UGC Act.
- NAAC A+

THE FACULTIES OF STUDIES

The following faculties currently are in operation in the University:

- MATS School of Management & Business Studies
- MATS Law School
- MATS School of Engineering & Information Technology
- MATS School of Education
- MATS School of Information Technology
- MATS School of Library Science
- MATS School of Sciences & Forensic Science
- MATS School of Arts & Humanities
- MATS School of Pharmacy
- MATS School of Physical Education & Yoga
- MATS School of Social Science

ABOUT MATS CENTRE FOR OPEN and DISTANCE EDUCATION

MATS University is a prestigious institution established in 2006, committed to providing quality, accessible education through innovative distance learning methodologies. Through the Open and Distance Education from MATS University learners can unlock endless opportunities with flexible, comprehensive Open and Distance Education programmes designed for busy professionals and dedicated learners, so they can Achieve their academic dreams with ease of learning and at their convenience. MATS Centre for Open and Distance Education (MCODE) provides flexible, inclusive, and accessible educational opportunities through distance learning,

maintaining rigorous academic standards and global relevance. MCODE has integrate advanced technologies, innovative pedagogies, and comprehensive support systems that enrich the learning experience with reliability to gain more and more knowledge through the practical approach of learning. MCODE aims to nurture intellectual curiosity, professional competence, and ethical consciousness among learners, preparing them to thrive in the competitive world. Open and Distance Education will enhance employability, entrepreneurial capabilities, and leadership skills by aligning programmes with industry and societal needs, ensuring holistic development of students.

MATS Centre for Open and Distance Education vision is be recognized as a benchmark institution for providing accessible, inclusive, and quality-driven open distance education, empowering learners to achieve academic and professional excellence irrespective of their geographical locations. The mission of the MCODE is to improve the quality of education in the area with the help of advanced technology and use of ICT in Open and Distance Learningso the learners are aware from the latest technologies and become a skilled professional. Following are the key points about MCODE that makes it unique and futuristics.

- Well-structured, up-to-date materials available digitally form for easy access.
- Flexible, secure, and user-friendly examination process for a stress-free assessment experience.
- Dedicated helpdesk, online counseling & personalized mentoring for academic queries.
- Access thousands of digital books, journals, and research materials anytime, anywhere.
- State of the art Learners Management System (LMS).
- Dedicated learners support service system to help out the learners in every step of their academic journey.
- Well-designed SLM along with interactive learning methods and techniques, in both the form printed and digital so learners can have ease of access.
- Audio/Video lectures in the form of e-SLM for the learners.
- ICT based contact classes along with doubt clearing sessions.
- Video Conferencing for interactive presentation and live sessions.
- Course content delivery mechanism through use of mail id, websites, various online sources.

- We have already run the distance education programme in the previous sessions 2011-13 and 2017-19.

ABOUT PROGRAMME

A. Programme's Mission and Objectives:

Mission:

The mission of the programme Post Graduate Diploma in Computer Application (PGDCA) in Open and Distance Learning mode of Education is to empower students with comprehensive theoretical knowledge and practical skills in computer applications through accessible, flexible, and innovative learning mode of education, fostering adept professionals for the evolving digital landscape. The programme aims to produce primary user and competent computer operator who can work in a professional way with the ability to face future challenges.

This is a post graduate diploma programme related to knowledge of computers and their applications in the field of information technology. This programme is for those learners who are passed Graduation exam from any stream, they can join this programme to learn about Information Technology and trends.

Objectives:

The Post Graduate Diploma in Computer Application (PGDCA) programme is designed to equip students with advanced knowledge and skills in computer science, software development, and information technology. The primary objective of the programme is to develop competent professionals who can contribute effectively to the IT industry and research domains.

Key Objectives:

1. Strong Theoretical Foundation: Provide in-depth knowledge of computer Application, data structures, database management, and software's.
2. Basic Programming Skills: Develop expertise in multiple programming languages, frameworks, and tools used in software development and application design.
3. Application Deployment: Train students to deploy and manage software

applications, enterprise solutions, and web-based systems.

4. Artificial Intelligence & Emerging Technologies: Introduce the use of AI and Machine Learning technologies to prepare students for future industry trends.
5. Problem-Solving & Analytical Thinking: Enhance logical reasoning, critical thinking, and problem-solving abilities to address real-world challenges in computing and IT domains.
6. Industry Readiness & Practical Exposure: Provide hands-on experience through laboratory work, internships, and industry collaborations to bridge the gap between academia and industry

The PGDCA programme aims to create skilled IT professionals who can excel in software applications in industry leadership roles while adapting to evolving technological landscapes.

B. Relevance of the Programme with University's Mission and Goals:

The Open and Distance Learning mode of the PGDCA programme aligns with MATS's University mission to cultivate a learning environment that fosters creativity, innovation, and critical thinking among students. The programme is designed to provide a world-class education in computer science and applications, with a focus on developing skilled professionals who can make valuable contributions to the industry and society. The PGDCA programme also aims to provide an inclusive and diverse learning environment, which is essential for the development of professionals who can work effectively in multicultural and global environments. The programme provides opportunities for students to engage in practical and project-based learning, which helps them develop teamwork skills, leadership skills, and communication skills. These are essential skills that prepare students to become successful professionals in the field of computer science and applications.

C. Nature of Prospective Target Group of Learners:

The programme aims at providing learning opportunities to a diverse group of learners falling under the category of non-traditional learners such as full-time working professionals, entrepreneurs, individuals in remote regions, non-residents and homemakers. The Open and Distance Learning mode of education OL PGDCA

programme is for students who cannot afford to pursue the education in regular mode due to time, cost and distance constraints.

D. Appropriateness of Programme to be Conducted in Online and Open and Distance Learning Mode to Acquire Specific Skills and Competence:

The Open and Distance Learning PGDCA programme will be delivered with flexibility, allowing students to learn at their own pace while balancing work, family, and education. The learning resources are designed to support self-sufficient, self-directed, and independent learning. The programme will be supported by a robust Learning Management System, offering a variety of resources including e-tutorials, e-materials, e-assignments, quizzes, discussion forums for doubt-solving, assessment and progress tracking tools, and display of results.

E. Expected Outcome of the Programme:

"At the end of the programme expected outcomes"

- To acquire a general knowledge, principles and mechanisms of Computer.
- To prepare the learners for employability.
- To acquire a basic knowledge of Subjects.
- To acquire techniques relevant of subjects taught.

PROGRAMME DELIVERY MODE

As the programme will offer in MATS Centre of Open and Distance Education mode, the there are various instructional delivery mechanisms and media will be used to effectively deliver content to the learners. The programme delivery mechanism used by MCDOE follows a multimedia approach for instructions, which are as follows:

- The self-learning material (SLM) which covers all the metrics of the programme will be deliver to the learners for every course.
- Learning Management System (LMS) is an online platform that provides a centralized location for students to access learning content, engage in discussions, submit assignments, and take assessments. The LMS provides a user-friendly interface that is accessible on multiple devices, such as desktops, laptops, tablets, and smartphones.

- Webinars can be used for lectures, discussions, or interactive sessions with students. Pre-recorded video lectures can be used to deliver course content in a concise and engaging way. Interactive multimedia includes simulations, games, and quizzes that are designed to reinforce learning.
- Discussion forums can be used to facilitate group discussions, peer-to-peer learning, and to provide feedback and support. Open and face-to-face counselling will be provided by academic counsellors appointed for the programme.
- The counseling sessions are held as per schedule drawn by the MCDOE. These counselling sessions are held in non-working hours for the learners so they can attend the counselling session properly and regularly to enhance their learning skills.
- Live session will be conducted through the use of Internet Communication Technologies (ICT) from the University's studio, the schedule of which is made available at the Leaner Support System.
- Programmes which have industrial training/practical/ project component are held at University's learners support centers and Attendance of the leaner in this part of the courses is compulsory. As per guidelines Project Work of the programme will be done by the learners and regarding this a complete guide will be deliver to the learner along with study material.
- The SLM will be dispatched periodically to the enrolled learners for each course of the programme. These SLM's will be very helpful to the learners in effective learning. The assignment for internal assessment of learner's shall be deliver to the learners along with the SLM. Online modules are also available in the University's website for some programme.
- The contact classes and counselling schedule will be schedule in online mode through LMS.

EVALUATION SYSTEM

The eligibility for the admission is passed in graduation examination or equivalent. Learners have the convenience of accessing all the information related to admission procedure and other information through the University's website or by contacting the helpdesk number. They can apply online admission form the university website. Upon receipt, the University will scrutinize the documents and process the payment of fees. Once the fees are cleared, the admission will

be confirmed, and an enrollment number will be issued to the learner.

- **Examination and Evaluation System:**

  Evaluation shall be based on continuous assessment, in which sessional work and the terminal examination shall contribute to the final grade through online mode. Sessional work shall consist of class tests, mid-semester examination(s), homework assignments, etc., as determined by the faculty in charge of the courses of study. Progress towards achievement of learning outcomes shall be assessed using the following: time-constrained examinations; closed-book and open-book tests; problem-based assignments; observation of practical skills; individual project reports (case-study reports); team project reports; oral presentations, including seminar presentation; viva voce interviews; computerized adaptive assessment, examination on demand, modular certifications, etc. through online mode.

  Each course shall correspond to an examination paper comprising of external and internal evaluations. The semester end theory examinations for Major, Minor, Open/Generic and DSC (Discipline specific Course) vocational, value added, SEC (Skill Enhancement Course) and AEC (Ability Enhancement Course) shall be of a duration as promulgated through the examination's regulations approved by the Academic Council of the University. The credit structure for theory/Practical/tutorial, internal, external examinations and total marks for an examination shall be as per the programme structure approved by the Academic Council of the University as per UGC norms. Students shall acquire a minimum passing mark in internal and external examinations separately to be declared as pass in the respective courses, as prescribed by the Academic Council.

  1. The academic performance of a candidate shall be evaluated in respect of the courses of study prescribed for each semester through the evaluation. The evaluation of students admitted in the programme shall be based on:
     1.1. End Semester Examinations - 70% marks of total marks and
     1.2. Continuous Internal Assessment - 30% of total marks
  2. The End Semester examinations shall be held as per the academic

calendar notified by the University and the duration of end semester examination shall be of three or two hours.

3. The minimum percentage of marks to pass the programme in each semester shall be 40% in each course comprising of end semester examinations and continuous evaluation.
4. A programme shall have a specified number of credits in each semester. The number of credits along with grade points that the student has satisfactorily cleared shall measure the performance of the student
5. Semester examination results shall have following categories:

   5.1.1 Passed, i.e., those who have passed in all courses of the semester examination in internal and external examination separately.

   5.1.2 Promoted (ATKT), i.e., those who have earned minimum 50% of credits in a particular year including both the semesters (even and odd) or those who have earned any number of credits in odd semester.

   5.1.3 Detained, i.e., those who are not promoted as per the above provisions shall be detained. Such students have to appear in the examination of next academic session to earn required credits (excluding the credits already earned) as per the provisions of this ordinance and only then he/she may continue the programme within stipulated period as per the provisions of this ordinance.

6. However, a student of any semester who has been detained/ not appeared in examination due to less attendance/ not applied for examination/ applied but not appeared shall be out from the programme. Such a student has to take admission in the next session as an ex-student through the procedure adopted/notified by the University.

The Fee Structure of the Programme

NAME OF THE COURSES	DURATION (SEMESTER)	ADMISSION FORM FEE (RS.)	COURSE FEE (PER YEAR)	EXAM FEE (PER YEAR)	TOTAL FEE (PER YEAR)
Post Graduate Diploma of Computer Application (PGDCA)	2	500	9000	3000	12,500

LEARNER SUPPORT DESK:

Contact Person: Dr. Vaibhav Sharma

Phone: 07714078995/96

Email: help@matsodl.com

Director

MATS Centre for Open and Distance Education (MCODE) MATS University

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Phone: 07714078995/96

Post Graduate Diploma in Computer Application (PGDCA)

Teaching Evaluation Schema

Course: Post Graduate Diploma in Computer Application (PGDCA) : Sem I									
Courses			**Teaching scheme**				**Evaluation Scheme**		**Total Marks**
Course Category	**Course Name**	**Course Code**	**Hours**			**Credits**			
			Theory	**Tutorial**	**Practical**		**CIA**	**ESE**	
Discipline Specific Core Courses (DSCC)	Computer Fundamentals	PGDCA101	3	1	0	4	30	70	100
Discipline Specific Core Courses (DSCC)	Programming in C	PGDCA102	3	1	0	4	30	70	100
Discipline Specific Core Courses (DSCC)	Programming in C Lab	PGDCA103	0	0	4	2	15	35	50
Discipline Specific Core Courses (DSCC)	Database Management System Concepts	PGDCA104	3	1	0	4	30	70	100
Discipline Specific Core Courses (DSCC)	Database Management System Concepts Lab	PGDCA105	0	0	4	2	15	35	50
Skill Enhancement Course (SEC)	Office Automation	PGDCA106	0	0	8	4	30	70	100
			9	**3**	**16**	**20**	**150**	**350**	**500**

Course: Post Graduate Diploma in Computer Application (PGDCA): Sem II									
Courses			**Teaching scheme**				**Evaluation Scheme**		**Total Marks**
Course Category	**Course Name**	**Course Code**	**Hours**			**Credits**			
			Theory	**Tutorial**	**Practical**		**CIA**	**ESE**	
Discipline Specific Core Courses (DSCC)	Web Designing with HTML/PHP	PGDCA201	3	1	0	4	30	70	100
Discipline Specific Core Courses (DSCC)	Web Designing with HTML/PHP Lab	PGDCA202	0	0	4	2	15	35	50
Discipline Specific Core Courses (DSCC)	RDBMS Concepts	PGDCA203	3	1	0	4	30	70	100
Discipline Specific Core Courses (DSCC)	RDBMS Concepts Lab	PGDCA204	0	0	4	2	15	35	50
Discipline Specific Core Courses (DSCC)	Operating System Fundamentals	PGDCA205	3	1	0	4	30	70	100
Project Management	Mini Project	PGDCA206	0	0	8	4	30	70	100
			9	**3**	**16**	**20**	**150**	**350**	**500**

SYLLABUS

PROGRAM: PGDCA SEMESTER:I WEF:2024-25

CourseCode:PGDCA101	Credit:04	Course: Computer Fundamentals	L:03|T:01|P:00

No.	Module Description	
Module 1:	**Computer Organization**	
	Unit 1.1:	Introduction of Computers, Characteristics of computers
	Unit 1.2:	Evolution of computer
	Unit 1.3:	Arithmetic Logic Unit (ALU), Control Unit (CU), Central Processing Unit (CPU)
	Unit 1.4:	Input unit, Output unit and Storage unit
	Unit 1.5:	Types of Memory: RAM, ROM, PROM, EPROM, EEPROM, Cache
	Unit 1.6:	System concepts
	Unit 1.7:	Classification of computers
Module 2:	**Digital System and Boolean Algebra**	
	Unit 2.1:	Overview of digital systems and their application, number system: representation and conversion
	Unit 2.2:	Binary coded decimal (BCD)representation
	Unit 2.3:	Boolean algebra fundamentals
	Unit 2.4:	Basic Theorem and properties of Boolean algebra
	Unit 2.5:	Boolean function
	Unit 2.6:	Canonical and standard forms
Module 3:	**Gate-level Minimization**	
	Unit 3.1:	Introduction
	Unit 3.2:	The map method
	Unit 3.3:	Karnaugh maps(K-maps) for simplifying Boolean expressions.
	Unit 3.4:	product of sums simplification
	Unit 3.5:	Don’t care condition
	Unit 3.6:	NAND and NOR implementation
Module 4:	**Computer Software**	
	Unit 4.1:	Introduction to Software
	Unit 4.2:	Relationship between Hardware and Software
	Unit 4.3:	Types of Software
	Unit 4.4:	Logical System Architecture
	Unit 4.5:	Firmware, Middleware
	Unit 4.6:	Pre-written Software, Customized Software
Module 5:	**Cyber Security**	
	Unit 5.1:	Cyber security: Introduction, Significance, Working of Cyber Security, Challenges, Cyber Laws
	Unit 5.2:	Types of cyber-attacks: malware, Phishing, DDoS, Password, Man in the middle, SQL Injections, Prevention from Cyber
	Unit 5.3:	Future Trends in Cyber security: Artificial Intelligence and Machine Learning, Cloud

		Security, Internet of Things (IoT) Security, Quantum Security, 5G Security.
	Unit 5.4:	Emerging Trends in Digital Media: Influencer Marketing, Omnichannel Marketing, Artificial Intelligence, Deep fake videos, Video Marketing, Metaverse, Chatbots.

Text Books/Resources:

1. Pradeep K. Sinha, "Computer Fundamentals":TB#1
2. E Balagurusamy , "FUNDAMENTALS OF COMPUTERS", Tata McGraw Hill :TB#2
3. M. Morris Mano, "Computer System Architecture":TB#3

Reference Books/Resources

1. https://www.researchgate.net/publication/258339295_FUNDAMENTALS_OF_COMPUTER_STUDIES
2. https://www.geeksforgeeks.org/computer-fundamentals-tutorial/
3. https://www.simplilearn.com/tutorials/cyber-security-tutorial/types-of-cyber-attacks :RB#4
4. https://www.zenarmor.com/docs/network-security-tutorials/future-trends-in-cybersecurity :RB#5
5. https://emeritus.org/in/learn/digital-marketing-trends/:RB#6

SYLLABUS

PROGRAM: PGDCA SEMESTER: I WEF:2024-25

CourseCode:PGDCA102	**Credit:04**	**Course: Programming in C**	**L:03|T:01|P:00**

No.	Module Description	
Module 1:	**Algorithm, Flow Chart and Programming languages**	
	Unit 1.1:	Introduction of algorithm and flowchart
	Unit 1.2:	Type of software and programming languages
	Unit 1.3:	Introduction to C: Program structure, Per processor Derivatives
	Unit 1.4:	Token, Data Type, Format Specifier, Operators
	Unit 1.5:	Header files
Module 2:	**Control Statements, Array and String**	
	Unit 2.1:	Control Statements: Definition and types
	Unit 2.2:	Branching, Looping, Jumping Statement and its types
	Unit 2.3:	One dimensional, Two dimensional and Multidimensional Array
	Unit 2.4:	Character Array: Initialization, Reading, writing
	Unit 2.5:	String Manipulation functions
Module 3:	**Function and Pointer**	
	Unit 3.1:	Function: Introduction, types of functions
	Unit 3.2:	Function: Nested function, Recursion
	Unit 3.3:	Passing array as a function parameter
	Unit 3.4:	Pointer and Array: Pointer Expression, pointer with array and string, Array of Pointer
	Unit 3.5:	Pointer and Function: Pointer as function parameter
Module 4:	**Structure and Dynamic Memory Allocation**	
	Unit 4.1:	Array of Structure, Array Within Structure

	Unit 4.2:	Structure within structure
	Unit 4.3:	Structure and Function: Structure as a function parameter
	Unit 4.4:	Memory allocation concept
	Unit 4.5:	Dynamic memory allocation: malloc, calloc, free and realloc
Module 5:	**File Handling**	
	Unit 5.1:	Introduction of file concept: Opening, closing
	Unit 5.2:	Input/output Operation in file
	Unit 5.3:	Error Handling during I/O Operation
	Unit 5.4:	Random Access file

Text Books/Resources:

1. EBalaguruSwami,"ProgramminginANSI",TataMcGrawHills:**TB#1**
2. KRVenugopalandSRPrasad,"MasteringinC",TataMcGrawHills:**TB#2**

Reference Books/Resources

1. Yashavant Kanetkar,"LetUsC",BPB Publication
2. https://www.javatpoint.com/c-programming-language-tutorial
3. https://www.w3schools.com/c/

SYLLABUS

PROGRAM:PGDCA SEMESTER: I WEF:2024-25

Course Code: PGDCA104	**Credit:04**	**Course: Database Management System Concepts**	**L:03|T:01|P:00**

No.	Module Description	
Module 1:	**Introduction to Database Management System**	
	Unit 1.1:	Introduction and purpose of database
	Unit 1.2:	View of Data: Data Abstraction, Instances and Schemas, Data Models
	Unit 1.3:	Database Languages: DDL and DML
	Unit 1.4:	Database Architecture: Two-tier, Three-tier
	Unit 1.5:	Database Users and Administrator: Functions and Roles
	Unit 1.6:	Introduction to Data Mining, Data warehouse, Big Data, Data Analytics
Module 2:	**Data Modeling and Database Design**	
	Unit 2.1:	Design Process
	Unit 2.2:	E-R Model
	Unit 2.3:	Constraints
	Unit 2.4:	E-R Diagram
	Unit 2.5:	Weak and Strong Entity Set
Module 3:	**Relational Database Design**	
	Unit 3.1:	Extended E-R Features : Generalization and Specialization
	Unit 3.2:	Constraints on Specialization
	Unit 3.3:	Relational Model Structure

	Unit 3.4:	Database Schema
	Unit 3.5:	Keys: Super, Candidate, Primary, and Foreign key
	Unit 3.6:	Schema Diagram
	Unit 3.7:	Conversion of E-R to Relational Model
PRACTICAL MODULE		
Module 4:	**Managing Database and Table**	
	Unit 4.1:	Select, Create and Drop Database
	Unit 4.2:	Create, Rename, Alter Table, Truncate and Drop Table
	Unit 4.3:	Data Types: BIT, BOOLEAN, CHAR, VARCHAR, DATE, DATETIME, DECIMAL
	Unit 4.4:	Insert, Update and Delete Records
	Unit 4.5:	Constraint: Primary Key, Foreign Key, UNIQUE Constraint, NOT NULL Constraint, DEFAULT Constraint, CHECK Constraint
Module 5:	**Spring and Spring Boot Framework**	
	Unit 5.1:	SELECT, ORDER BY, WHERE, SELECT DISTINCT
	Unit 5.2:	Operators: AND, OR, IN, BETWEEN, LIKE, LIMIT, IS NULL
	Unit 5.3:	Numeric, String and Date functions
	Unit 5.4:	Joins: INNER JOIN, LEFT JOIN, RIGHT JOIN, SELF JOIN
	Unit 5.5:	Aggregate F, Functions: GROUP BY, HAVING, MIN (), MAX (), AVG (), SUM (), COUNT ()
	Unit 5.6:	Sub-query

Text Books/Resources:

1. Henry F. Korth, “Database System Concepts”,TataMcGrawHills
2. IvanBayross,MySQL5.1forProfessionals, SPD

Reference Books/Resources

1. ElmasriandNavathe,“FundamentalsofDatabaseSystems”,PearsonEducation.
2. ThomasConnollyandCarolynBegg,“DatabaseSystems,APracticalApproachto Design Implementation and Management", Pearson Education
3. MySQL Referencehttps://www.mysqltutorial.org/
4. MySQL Reference Manual-https://dev.mysql.com/doc/refman/8.0/en/

SYLLABUS

PROGRAM:PGDCA SEMESTER: I WEF:2024-25

CourseCode:PGDCA106	**Credit:04**	**Course: Office Automation**	**L:00|T:00|P:04**

No.	Module Description	
Module 1:	**Word Processing**	
	Unit 1.1:	Working With Document: Opening, Saving and Editing Files, Inserting, Deleting Files
	Unit 1.2:	Margins: Converting Files to Different Format Using Tools Bar

	Unit 1.3:	Page Style, Alignment -Indents, Line Space, Border and Shading
	Unit 1.4:	Header and Footer Setting
	Unit 1.5:	Drawing: Inserting Clip Arts Pictures/Files Etc.
	Unit 1.6:	Word Completion: Spell Checks
	Unit 1.7:	Mail Merging
Module 2:	**Spread Sheet**	
	Unit 2.1:	Spread Sheet and Its Applications
	Unit 2.2:	Working With Spreadsheet: Opening, Saving, File Setting
	Unit 2.3:	Spreadsheet Addressing: Rows, Columns and Cells, Referring Cells
	Unit 2.4:	Inserting Data: Insert Cells, Columns, Rows and Sheets
	Unit 2.5:	External Files: Frames Clipart, Pictures etc.
	Unit 2.6:	Formula Tab
Module 3:	**Presentation**	
	Unit 3.1:	Introduction To Presentation: Opening New Presentation
	Unit 3.2:	Selecting Presentation Layout
	Unit 3.3:	Adding Text to the Presentation
	Unit 3.4:	Header And Footer
	Unit 3.5:	Slide Layout
	Unit 3.6:	Adding Graphics to the Presentation, Setting Animation and Transition Effect
Module 4:	**Database**	
	Unit 4.1:	Introduction to MS Access :Overview of database concepts, Components of Access (Tables, Queries, Forms, Reports)
	Unit 4.2:	Tables and Data Types :Creating and designing tables, Field types, primary keys, relationships between tables
Module 5:	**Query and Report**	
	Unit 5.1:	Queries and Data Retrieval : Creating select, action, and parameter queries, Using criteria and expressions for data filtering
	Unit 5.2:	Forms and Reports: Designing user-friendly forms, Generating and formatting reports for data presentation

Text Books/Resources:

1. Top help topics – Microsoft Support
2. https://www.w3schools.com/html/

Reference Books/Resources

1. https://www.tutorialspoint.com/wordpress/index.htm

SYLLABUS

PROGRAM:PGDCA SEMESTER:II WEF:2024-25

Course Code:PGDCA201	**Credit:04**	**Course : Web Designing with HTML/PHP**	**L:03|T:01|P:00**

No.	Module Description	
Module 1:	**Introduction to Web Design**	
	Unit 1.1:	WWW, Working of Websites
	Unit 1.2:	Web designing process, UX AND UI
	Unit 1.3:	Front End, Back End, Client and Server Scripting Languages
	Unit 1.4:	Responsive Web Designing
	Unit 1.5:	Types of Websites: Static and Dynamic Websites
Module 2:	**HTML Concepts**	
	Unit 2.1:	Introduction to HTML, HTML Editor, HTML Basics
	Unit 2.2:	HTML Elements and Attributes
	Unit 2.3:	Heading, Types of Heading, Paragraphs, Style
	Unit 2.4:	Formation, Quotations, Comments
	Unit 2.5:	Links, Colors, Images
	Unit 2.6:	List, Tables
	Unit 2.7:	Forms, Form Elements, Input types, Text Input, Text Area, Dropdown, Radio buttons, Check boxes, Submit and Reset Buttons.
Module 3:	**CSS Concepts**	
	Unit 3.1:	Introduction to CSS, Types of CSS
	Unit 3.2:	Selectors, Comments, Colors
	Unit 3.3:	Background, Borders, Margins, Padding, Height/Width
	Unit 3.4:	Box Model, Outline, Text, Fonts, Icons
	Unit 3.5:	Link, Lists, Tables, Displays
	Unit 3.6:	Positions, Overflow, Float, inline-block
	Unit 3.7:	CSS Menu Design CSS Image Gallery
Module 4:	**Introduction to PhP**	
	Unit 4.1:	Introduction to PHP: Features and advantages, Applications of PHP, Installing XAMPP/WAMP/LAMP, Configuring PHP
	Unit 4.2:	PHP Basics: PHP syntax and tags, Variables and data types, Constants, Operators (Arithmetic, Comparison, Logical)
	Unit 4.3:	Control Structures :Conditional statements (if, else, elseif, switch), Loops (for, while, do-while, foreach)
	Unit 4.4:	Array and Functions in PHP : Array and its type, Defining and calling functions, Function arguments and return values, Variable scope
	Unit 4.5:	Working with Forms: GET and POST methods, Form handling and validation
Module 5:	**Web Features, MySQL and Error Handling in PhP**	
	Unit 5.1	PHP and Web Features: Working with cookies, Session management
	Unit 5.2	File handling: open, read, write

	Unit 5.3	PHP and MySQL :Introduction to databases, Connecting PHP with MySQL,
	Unit 5.4	CRUD operations: Create, Read, Update, Delete

Text Books/Resources:

1. IvanByross,"WebEnabledCommercialApplicationDevelopmentUsing. HTML, JavaScript, DHTML and PHP ", BPB Publication#TB1
2. https://www.w3schools.com/
3. https://www.tutorialspoint.com/index.htm
1. Welling, L., & Thomson, L. (2017). PHP and MySQL Web Development (5th ed.). Addison-Wesley
2. Holzner, S. (2008). PHP: The Complete Reference. McGraw-Hill Education.

Reference Books/Resources

3. DTEditorial,"WebTechnology:BlackBook",dreamteach
4. ThomasA.Powell,"TheCompleteReferenceHTML&CSS",McGrawHill

SYLLABUS

PROGRAM:PGDCA SEMESTER:II WEF:2024-25

CourseCode:PGDCA203	Credit:03	Course: RDBMS Concepts	L:03|T:01|P:00

No.	Module Description	
Module 1:	**Relational Database Design**	
	Unit 1.1:	E.F. Codd's Rule
	Unit 1.2:	Functional dependency, Armstrong's Inference rules
	Unit 1.3:	Decomposition of Relations: Lossless Join and Dependency Preservation Property
	Unit 1.4:	Normalization: First, Second and Third Normal Form
	Unit 1.5:	Denormalization
Module 2:	**Procedural SQL**	
	Unit 2.1:	Compound statements and labels
	Unit 2.2:	Overview of Control and Iterative statements: IF,CASE, LEAVE, WHILE,LOOP
	Unit 2.3:	Cursors: OPEN, CLOSE and FETCH
	Unit 2.4:	User Defined Function: Need, RETURN statement
	Unit 2.5:	Stored Procedure: Need and usage
Module 3:	**Triggers**	
	Unit 3.1:	Triggers and their usage
	Unit 3.2:	Trigger Activation
	Unit 3.3:	BEFORE and AFTER trigger
	Unit 3.4:	COMMIT, ROLLBACK, SAVEPOINT
Module 4:	**Transaction Processing**	
	Unit 4.1:	Transaction: Introduction, Transaction Model
	Unit 4.2:	Properties of Transactions
	Unit 4.3:	Transaction isolation, Schedules: Serial, Non-Serial Schedules
	Unit 4.4:	Serializability, Conflict Serializability
Module 5:	**Concurrency Control**	
	Unit 5.1:	Concurrent Transactions: Purpose
	Unit 5.2:	Concurrency Control Protocol: Two Phase Locking(2PL) Protocol
	Unit 5.3:	Strict 2PL, Conservative 2PL
	Unit 5.4:	Deadlock and Starvation
	Unit 5.5:	Deadlock Detection and Resolution: Wait-for graph

Text Books/Resources:

1. Henry F. Korth, "Database System Concepts", TataMcGrawHills
2. IvanBayross,MySQL5.1forProfessionals, SPD

Reference Books/Resources

1. ElmasriandNavathe,"FundamentalsofDatabaseSystems",PearsonEducation.
2. ThomasConnollyandCarolynBegg,"DatabaseSystems,APracticalApproach to Design Implementation and Management", PearsonEducation

3. MySQL Referencehttps://www.mysqltutorial.org/
4. MySQL Reference Manual -https://dev.mysql.com/doc/refman/8.0/en/

SYLLABUS PROGRAM:PGDCA SEMESTER:II WEF:2024-25				
Course Code: PGDCA205		**Credit:04**	**Course: Operating System Fundamentals**	**L:03|T:01|P:00**
No.	**Module Description**			
Module 1:	**Introduction to Operating System**			
	Unit 1.1:	Definition and function of an operating system		
	Unit 1.2:	Types of operating system: batch, time-sharing, real-time, distributed, embedded		
	Unit 1.3:	System call and interface		
	Unit 1.4:	The role of OS in a computing environment		
	Unit 1.5:	OS structure: Monolithic, microkernel, hybrid architectures		
Module 2:	**Operating System Services**			
	Unit 2.1:	Process management and scheduling		
	Unit 2.2:	Memory management		
	Unit 2.3:	File systems		
	Unit 2.4:	I/O management		
	Unit 2.5:	Device drivers		
	Unit 2.6:	Security and protections		
Module 3:	**Processes Management**			
	Unit 3.1:	Concept of processes, threads, and programs		
	Unit 3.2:	Process state model		
	Unit 3.3:	Process scheduling and CPU scheduling algorithms		
	Unit 3.4:	Context switching		
Module 4:	**Memory Management**			
	Unit 4.1:	Contiguous Memory Allocation		
	Unit 4.2:	Paging Techniques: Swapping, Paging, Segmentation, Fragmentation		
	Unit 4.3:	Demand Paging.		
	Unit 4.4:	Page Replacement : Page Replacement Algorithm		
	Unit 4.5:	Virtual Memory.		
Module 5:	**Linux OS**			
	Unit 5.1:	Introduction to Linux		
	Unit 5.2:	Linux File System & Directory Structure		
	Unit 5.3:	Linux commands: Basic Linux Commands, User & Group Management, Process Management		
	Unit 5.4:	Shell scripting: Basics of Shell Scripting, Variables, Loops, and Conditional Statements, Creating and Executing Scripts		
	Unit 5.5:	VI Editor		

Text Books/Resources:

1. Abraham Silberschatz, Peter B Galvin, and Gerg Gagne – “Operating System Concepts”, Wiley.

INSTRUCTIONS TO STUDENTS FOR FORMATTING THE ASSIGNMENTS

1. This booklet contains the assignments for the entire (All Semester) programme. Each course has one assignment. All assignments should be completed and submitted at MCODE MATS University/ study centre before the due date.

2. Please note that you will not be allowed to appear for the Term End Examinations for the course, until the assignments are submitted before the due date.

3. The assignments constitute the continuous component of the evaluation process and have 30% weightage in the final grading. You need to score minimum marks as per Examinations Scheme of Particular Programme in assignment in each course in order to clear the continuous evaluation component.

4. The assignment should be hand written on a A-4 size paper with proper cover which contains all the required information as given on the next page. You can use the photocopy of the cover for each assignment.

5. Leave at least 4 cm margin on the left, top and bottom of your answer sheets for the evaluator's comments.

6. Your answers should be brief, precise and in your own words. Please do not copy the answers from the study material.

7. Please do not copy the assignment from another student.

8. While solving the questions, clearly indicate the question number along with the part being solved. Recheck your work before submitting it.

9. You may retain a copy of your assignment response to avoid any unforeseen situation.

10. You can resolve the difficulties you may face while studying the course material by sending an e-mail to Programme coordinator MCODE / study centre coordinator. However, the coordinator will not provide solutions to the assignment questions, since they constitute an evaluation component.

Note: Assignments of the course are available for download at the MATS University Website http://www.matsuniversity.ac.in . You can download the assignments as per your course, follow the instructions given and submit it before due dates at the MCODE MATS University/study centre.

GUIDELINE FOR PREPARATION OF DISSERTATION REPORT

PROJECT REPORT FORMAT MCODE PROGRAMME

The Project Report consists of three main parts (i) The Preliminaries (ii) The Text (iii) Annexure. It is to be arranged in the following sequence.

THE PRELIMINARIES:

- Title Page (Outer Cover) as per the format given in Annexure III, (should be printed in White Color on a Navy Blue background).
- Title Page (Inner Cover) as per the format given in Annexure IV
- Declaration by the candidate (Annexure – V)
- Certificate of Supervisor/s (Annexure – VI)
- Acknowledgements (Annexure – VII)
- Table of Contents (Annexure – VIII)
- Abstract/Preface
- List of Tables (If applicable)
- List of Figures (If applicable)
- List of abbreviations (Optional)
- Chapter –I to …. continue according to the table of contents.

THE TEXT OF THE PROJECT REPORT

The text the Project Report is usually divided in to chapters with subheadings, within the chapters to indicate the orderly progression of topics and their relation to each other

Chapter-I Introduction: - The Project Report should normally begin with a general introduction presenting an overview of the purpose and significance of the study. The introduction should show why the topic selected is worth investigating. This will normally be done with reference to existing research, identifying areas that have not been explored, need to be explored. The final section of the introduction should provide a brief overview of each of the main chapters that the reader will encounter.

Chapter-II Review of Related Literature: - The purpose of the literature review is to summarize, evaluate and compare the main developments and current database in the field which are specifically relevant to the subject of research embodied in the Project Report.

Chapter-III Research Methodology: - The supervisor and the student may decide how this part of the Project Report should be structured. Although this section varies depending up on method and analysis technique chosen, the chapter describes and justifies the methods chosen for the study and why this method was the most appropriate.

Chapter-IV Observations & Analysis: - Observations, Analysis and Interpretation should be done as per data collected from sample.

Chapter-V Results Conclusions and Suggestions: The results are actual statement of observations, including statistics, tables and graphs. Do not present the same data as graph as well as table. Use one of the appropriate styles of presentation. The purpose of this chapter is not just to reiterate the findings but discuss the observation in relation to the theoretical body of knowledge on the topic.

Bibliography Citation in Text: Citation in the text usually consists of the name of the author(s) and the year of the publication. The page no is added when utilizing a direct quotation. It should be arranged Alphabetically.

Example (i): Thomas (2007) identified….

Example (ii): Gould and Brown (1991, p. 14) used the

Example (iii): Rhoades et. al (2008) define the

References: All publications listed in the Project Report should be presented in a list of references, following the sample.

Citation from Project Report:

- Kundur., D. (1999), Multiresolution Digital Watermarking: Algorithms and Implications for Multimedia Signals. Ph.D Project Report, University of Toronto.

Citation from Journal:

- Clifford, G. D. and Tarassenko., s L. (2001), One-pass Training of Optimal Architecture Auto-associativeNeural Network for Detecting Ectopic Beats. Electron Letters. 37(18): 1126–1127.
- Rhoades, B.E. (1997), A Comparison of various definitions of Contractive mappings, Trans.Amer.Math.Soc.,Vol. 5, no.3, 257-290.

Citation from Books:

- Thompson, D. ed., (1995), The Concise Oxford Dictionary of Current English. Oxford, UK: Oxford University Press, 9th ed. ISBN No.: 0987654.
- Lindsay, D. (1999), A Guide to Scientific Writing, Melbourne, Chapter 2, Australia: Addison Wesley Longman Australia, 2nd ed. ISBN No.: 12345678.

Citation from Website:

Anonymous, unZign, "Tool for Evaluating a Variety of Watermarks", http://altern.org/watermark/, (Browsing date: 23rd September 1997)

Publication of the University of Geneva (on digital watermarking): <http:// cuiwww.unige.ch/˜vision/Publications/watermarking_publications.html> (Browsing Date: 4thJanuary 2006)

Citation from patent:

Gustafsson J. K. (1976), "Analog-digital converter for a resistance bridge", Patent U. S. 3960010, June 1.

References must be given alphabetically in References section and in text as ….

Clifford. G. D. and Tarassenko. L. (2001) suggested that……

Appendices:

- Questionnaire /Formula /Diagnosis/Any other Supporting Documents

GUIDELINES FOR WRITING: -

1. Font size	**For English**	**Font size For Hindi**
Title Page	18-24	18-24

Headings / subheadings	12-16	16-20
Text	12	14
Footnotes	8-10	10-12

Footnotes be given on the same page where reference is quoted

2. **Type style**

Times New Roman for English Kruti dev 10 for Hindi

3. **Margins.**

At least 1¼ -1½ inches (3.17-3.81cm) on the left-hand side, 3/4 - 1 inch (2 -2.54cm) at the top and bottom of the page, and about ½ - 0.75 inches (1.27 - 1.90cm) at the outer edge. The best position for the page number is at top-center or top right ½ inch (1.27 cm) below the edge. Pages containing figures and illustration should be suitable paginated.

4. The *Project Report* shall be computer typed (**English**- British, Font Style -Times Roman, Size-12 point, **Hindi-** Font Style -Krutidev-10, Size-14) and printed on A4 size paper.
5. The *Project Report* shall be typed on one side only with double space with appropriate margin.
6. Use only standard abbreviations. Avoid abbreviations in the title. The full term for which an abbreviation stands should precede its first use in the text except in case of measurement units. The measurement units if any shall be followed consistently.
7. Maintain uniformity in writing the *Project Report.*
8. All copies of the *Project Report* are to be bound in colored hard cover (according to color code) of the *Project Report.*
9. The final submission of the *Project Report* shall be in 03 hard bound copies and 01 soft copy (MS Word) in a CD along with all the corrections and suggestions as recommended before.

ANNEXURE-III (Outer cover)

THE TITLE OF THE PROJECT REPORT IN THE OUTER COVER SHALL LOOK EXACTLY LIKE THIS TITLE

(Font: Times New Roman, Size:16, Bold, Line Spacing: 1 ½, Centered)

{Here put a gap of 4 lines}

Project Report submitted to

(Font: Times New Roman, Size: 12, Bold, centered)

{Here put a gap of one line}

<University's logo>

MATS Centre of Online Education

MATS University

Raipur (C.G.)

(Font: Times New Roman, Size: 14, Bold, centered)

{Here put a gap of one line}

For the award of the degree of

(Font: Times New Roman, Size: 12, Bold, centered)

{Here put a gap of one line}

PROGRAMME NAME

(Font: Times New Roman, Size: 14, Bold, centered)

{Here put a gap of two lines}

by

(Font: Times New Roman, Size: 12, Bold, centered)

{Here put a gap of two lines}

<NAME OF THE STUDENT>

(Font: Times New Roman, Size: 14, Bold, centered)

Registration No.: <>

(Font: Times New Roman, Size: 12, Bold, centered)

<Year>

(Font: Times New Roman, Size: 12, Bold, centered)

© <*Year*><*Name of the student*>. All rights reserved.

(Font: Times New Roman, Size: 10, Bold, Centered)

ANNEXURE-IV (Inner cover)

THE TITLE OF THE PROJECT REPORT IN THE INNER COVER SHALL LOOK EXACTLY LIKE THIS TITLE

(Font: Times New Roman, Size:16, Bold, Line Spacing: 1 ½, Centered)

{Here put a gap of 4 lines}

Project Report submitted to

(Font: Times New Roman, Size: 12, Bold, centered)

{Here put a gap of one line}

MATS Centre of Online Education

MATS University

Raipur (C.G.)

(Font: Times New Roman, Size: 14, Bold, centered)

{Here put a gap of one line}

For the award of the degree

of

(Font: Times New Roman, Size: 12, Bold, centered)

{Here put a gap of one line}

PROGRAMME NAME

(Font: Times New Roman, Size: 14, Bold, centered)

{Here put a gap of two lines}

by

(Font: Times New Roman, Size: 12, Bold, centered)

{Here put a gap of two lines}

<NAME OF THE STUDENT>

(Font: Times New Roman, Size: 14, Bold, centered)

Under the Guidance of

(Font: Times New Roman, Size: 12, Bold, centered)

<NAME OF THE SUPERVISOR/S>

(Font: Times New Roman, Size: 14, Bold, centered)

<Year>

(Font: Times New Roman, Size: 12, Bold, centered)

©<*Year*><*Name of the student*>. All rights reserved.

(Font: Times New Roman, Size: 10, Bold, Centered)

ANNEXURE-V

DECLARATION

I the undersigned solemnly declare that the Project Report entitled "**title of the work**" is based on my own work carried out during the course of my study under the supervision of < name of supervisor >.

I assert that the statements made and conclusions drawn are an outcome of my research work.

I further certify that

i. The work contained in the Project Report is original and has been done by me under the general supervision of my supervisor (s).

ii. The work has not been submitted to any other Institute for any other Degree/Diploma/Certificate in this University or any other University of India or abroad.

iii. I have followed the guideline provided by the University in writing the Project Report.

iv. I have conformed to the norms and guidelines given in the concerned Ordinance of the University.

v. Whenever I have used materials (data, theoretical analysis, and text) from other sources, I have given due credit to them by citing them in the text of the Project Report and giving their details in the references.

vi. Whenever I have quoted written materials from other sources, I have put them under quotation marks and given due credit to the sources by citing them and giving required details in the references.

(Name & Signature of the Student)

Registration No.

ANNEXURE-VI

CERTIFICATE

This is to certify that the work incorporated in the Project Report entitled "title of the Project Report" is a record of own work carried out by **<Name of Student >** under my supervision for the award of degree of **Programme Name** of MATS Centre of Open and Distance EducationMATS University, Bilaspur (C.G.)-India.

To the best of my knowledge and belief the Project Report:

i. Embodies the work of the candidate himself/herself,
ii. Has duly been completed.
iii. Is up to the desired standard both in respect of contents and language for being referred to the examiners.

Supervisor-
(Name and signature of the Supervisor
With designation and Name of Organization)

(Signature of Academic Coordinator)
(Seal of MCODE)

ANNEXURE-VII

ACKNOWLEDGEMENT

Acknowledgements should be brief and should not exceed one page. Acknowledgements should be duly signed by the candidate. Gratitude may be expressed to only those who really contributed to the work directly or indirectly. Name of student should appear at the bottom of the page.

SAMPLE ACKNOWLEDGEMENT

It is a matter of immense pleasure to express the overwhelming sense of gratitude, devotion, incontestable regards to my esteemed & learned guides <…….> who have striven to perfect my project report.

……
……
……..

Finally, I express my indebtedness to all who have directly or indirectly contributed to the successful completion of my project work.

< Name of Student >

ANNEXURE-VIII

TABLE OF CONTENTS

Final Instructions for Submitting Assignments

- All assignments should be completed and submitted at MCODE study centre before the due date.
- All the Assignment should be written by the learners, in some aspects print out of the assignment also accepted.
- The date of submission will be provided by the programme coordinator.
- The assignments constitute the continuous component of the evaluation process and have 30% weightage in the final grading. You need to score minimum marks as per Examinations Scheme of Particular Programme in

assignment in each course in order to clear the continuous evaluation component.

- Without submission of the assignment learners are not allowed to be appear in the term end examination.
- Assignments should be brief, precise and in your own words. Please do not copy the answers from the study material.
- You may retain a copy of your assignment response to avoid any unforeseen situation.

Guidelines for Project Submission

- The Project Report consists of three main parts:
  - (i) The Preliminaries
  - (ii) The Text
  - (iii) Annexure
- The text of the Project Report is usually divided in to chapters with subheadings, within the chapters to indicate the orderly progression of topics and their relation to each other.
- Bibliography Citation in Text: Citation in the text usually consists of the name of the author(s) and the year of the publication. The page no is added when utilizing a direct quotation. It should be arranged Alphabetically.
- The Project Report shall be computer typed and typed on one side only.
- Uniformity should be maintained in project report.
- Use only standard abbreviations. Avoid abbreviations in the title. The full term for which an abbreviation stands should precede its first use in the text except in case of measurement units. The measurement units if any shall be followed consistently.

The final submission of the Project Report shall be in three hard bound copies and one soft copy in MS Word along with all the corrections and suggestions as recommended before.

Note

MATS UNIVERSITY

NAAC GRADE A+ ACCREDITED UNIVERSITY

MATS CENTRE FOR DISTANCE AND ONLINE EDUCATION

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E-mail for odl mode : odladmissions@matsuniversity.ac.in,

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Website : www.matsodl.com & www.matsuniversityonline.com