श्री Davara University

Established under Chhattisgarh Private Universities (Establishment and Operation) Act, 2005

BCA AI

SEMESTER-I

Programme Curriculum

श्री Davara University

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SEMESTER I

S.NO	COURSE CODE	COURSE TITLE	TEACHING HOURS PER WEEK				EXAMINATION SCHEME				
							THEORY		PRACTICAL		TOTAL MARKS
DISCIPLINE SPECIFIC COURSE			L	T	P	C	EX	IN	EX	IN	
1.	BCAAI105	Discrete Mathematics	3	1	0	4	70	30	-	-	100
2.	DUBCAI-02	Computer Fundamentals And Its Applications	3	-	0	3	70	30	-	-	100
3.	BCAAI103	Programming in C	3	-	0	3	70	30	-	-	100
GENERAL ELECTIVE											
4.	DUGEODSC-104	Fundamentals of Physical Geography	3	-	0	3	70	30	-	-	100
5.	DUGEO104P	Cartography Tools And Techniques Lab	-	-	2	1	-	-	35	15	50
OR											
4.	BBA3003	Cost Accounting	4	-	0	4	70	30	-	-	100
VALUE ADDITION COURSE											
6.	DUVAC-01	Fundamental of Stock Market	2	0	0	2	35	15	-	-	50
ABILITY ENHANCEMENT COURSE											
7.	DUENGAEC-01	Communicative English	2	0	0	2	35	15	-	-	50
PRACTICAL LAB											
8.	DUBCAAI02P	Computer Fundamentals And Its Applications Lab	-	-	2	1	-	-	35	15	50
9.	BCAAI103P	Programming In C Lab	-	-	2	1	-	-	35	15	50

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Total Credit: 20	**Total Marks: 650**

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence **(Certificate/Diploma/Degree/Honors)**		**Semester-I**	**Session: 2024-2028**
Course Code	**BCAAI105**		
Course Title	**Discrete Mathematics**		
Course Type	**DSC (Discipline Specific Course)**		
Prerequisite	As per PROGRAMME		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Analyze logical propositions via truth tables. • Understand sets and perform operations and algebra on sets • Determine properties of relations, identify equivalence and partial order relations, sketch relations • Understand the fundamentals of Boolean algebra and its applications in switching circuit designing. • Understand and apply the group theory. • Understand the various graph theoretic concepts and familiarize with their applications		
Credit Value	**4 Credits**	**1 Credit = 15 Hours - Learning & Observation**	
Total Marks	**Max. Marks:100**	**Min marks -40**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-60 Periods (60 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	Sets and Relations, POSET and Lattices: Definitions, Types of Sets, Operations on Sets, Inclusion and Exclusion Principle, Cartesian Product and properties, Relation, Types of Relation, Equivalence Relation, Partial Order Relation, Function: Injective, Subjective, Bi-ejectives Mapping, Properties of partially ordered sets (Poset), Hasse diagrams, Maximal and minimal elements, Join Semi lattice, Meet Semi lattice, Sub-lattices, Distributive lattices: Complemented Lattice	15

II	Mathematical Logic, Boolean Algebra and switching circuits: Propositional Logic, Logical Connector, Boolean algebras, Properties of Boolean Algebra, Conjunctive and Disjunctive Normal forms, Boole's Expansion Theorem, Boolean polynomials, Minimal forms of Boolean polynomials, Quine-McCluskey method, Karnaugh diagrams, Switching Circuits and their Appl cations.	**15**
III	Group Theory: Definition and Properties: Semi group, Monoid, Group, Sub-Group, Abelian Group, Finite and Infinite Group, Product and Quotient of Algebraic Structure, lag ranges theorem, Rings, Integral Domain, Field, Applications of Group theory.	**15**
IV	Graphs: Definition, examples and basic properties of graphs, Königsberg seven bridge problem; Subgraphs, Pseudographs, Complete graphs, Planarity Graph. Cyclic, Chromatic Number, Handshaking Theorem, Bipartite graphs, Isomorphism of graphs, Paths and circuits, Eulerian circuits, Hamiltonian cycles, Adjacency matrix, Weghted graph, Travelling salesman problem, shartest path and Dijkstra's algorithm., Graph	**15**
Keywords	Set, Lattices, Switching Circuit, Bipartite, Path, Circuit, Lattices. Bolean algebra	

Name and Signature of Convener & Members of CBS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- B. A. Davey & H. A. Pries Jey (2002). Introduction to Lattices and Order (2nd edition). Cambridge University Press.
- Edgar G. Goodaire& Michael M. Parameter (2018). Discrete Mathematics with Graph Theory (3rd edition). Pearson Education.
- Reference Books Recommended
- Rudolf Lidl & Günter Pilz (1998). Applied Abstract Algebra (2nd edition). Springer.
- Kenneth H. Rosen (2012). Discrete Mathematics and its Applications: With Combinatorics and Graph Theory (7th edition). McGraw-Hill.
- C. L. Liu (1985). Element's of Discrete Mathematics (2nd edition). McGraw-Hill.

Online Resources:

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- SWAYAM Portal: Online Lectures on Discrete Mathematics
- https://onlinecourses.swayam2.ac.in/coc20 ma02/preview
- NPTEL YouTube Channel: Online Lectures on Discrete Mathematics
- https://youtube.com/playlist?list=PL0862D1A947252D20&si-salitYdT4Z_Js
- NPTEL YouTube Channel: Online Lectures on Discrete Mathematics
- https://youtube.com/playlist?list=PLEAYkSg4uSQ2Wfe M4QEZUSRdx2ZcFziO&i=q1UcKDC 34RMWcCz

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks:-30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A:Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type questions, 1 out of 2 from each unit-4x10=40 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024- 28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)		**Semester-I**	**Session: 2024-2028**
Course Code	**DUBCAI-02**		
Course Title	**Computer Fundamentals And Its Applications**		
Course Type	**DSC (Discipline Specific Course)**		
Prerequisite	**As per PROGRAMME**		
Course Learning Outcomes (CLO)	**After Completing this course, students will be able to:** • Study and use of basic concepts and terminology of information technology. • Organize files and documents on storage devices. • Acquire knowledge of ICT and Internet applications. • Develop information technology solutions by evaluating user requirements in advance trends of IT • Acquire knowledge of MS-Excel, MS-PowerPoint and MS-Access.		
Credit Value	**3 Credits**	**1 Credit = 15 Hours - Learning & Observation**	
Total Marks	**Max. Marks:100**	**Min marks -40**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-45 Periods (45 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	**Computer Basics and Architecture** Computer Basics: Introduction, Characteristics computers, Evolution computers, Generation of computers, Classification of computers, the computer system, Application of computers. Computer Architecture: Introduction, Central processing Unit- ALU, Registers, Control Unit, system bus, main memory Unit, cache memory, communication between various Units of a computer system. Components inside a computer system— System case, Power supply, Mother board, BIOS, Ports and Interfaces, Expansion card, Ribbon cable, Memory chips, Processors.	12
II	**Computer memory and storage** Computer memory and storage: Introduction, memory representation, memory hierarchy, Random access memory, Types of RAM, Read-only memory, Types of ROM, RAM, ROM and CPU interaction. Secondary Storage: Types of secondary storage device - Magnetic tape, magnetic disk, Floppy disk, Hard disk, Advantages and	11

	disadvantages of magnetic disk, Optical disk, Types- CD, DVD,	
III	**Input devices and Output devices** Input devices: Introduction, Types of input devices, Keyboard, Mouse, Introduction to Track ball, Joystick light pen, Touch screen and track pad. Speech recognition, digital camera, webcam, flatbed scanner, Optical character recognition, Optical Mark Recognition, Magnetic ink character recognition, Bar code reader. Output devices: Types of output, Classification of output devices, Printers- Dot matrix, drum printer, Ink jet, Laser, Hydra, Plotter, Monitor- CRT, displaying graphics on CRT, Colour display on CRT, LCD, Differences between LCD and CRT, Other types of monitors, Voice response, Projector, Electronic white board.	11
IV	Introduction to Computer programming languages, developing a program, Program development cycle, Types of programming languages, generation of programming languages, Features of a good programming language. Computer software: Introduction, software definition, relationship between software and hardware, software categories, Installing and uninstalling software, software piracy, software terminologies. Word processing software, Spreadsheet software: Excel environment, copying cells using Fill handle, dragging cells, Formulas and functions, Inserting Charts, sorting. Presentation software: Introduction, PowerPoint environment, creating a new presentation, working with different views, using masters, adding animation, adding transition, running slides. Microsoft Access: Access environment, Database objects.	11
Keywords	**Information Technology (IT). Information and Communication Technology (ICT), G-Suite, MS Word, MS Excel, MS Power Point, MS-Access.**	

Name and Signature of Convener & Members of CBoS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- Computer Fundamentals, P.K. Sinha, BPB Publication, Sixth Edition.
- Fundamentals of Information Technology, Chetan Shrivastava, Kalyan Publishers.
- Fundamentals of Computers, V. Rajaraman, PHI Sixth Edition.
- Computer Fundamentals and Office Automation, Dr. Santosh Kumar Miri, Iterative International Publisher IIP.
- Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publishers, Fifth Edition.
- Fundamentals of Information Technology, Alexis Leon and Mathews Leon, Vikash Publication.

Reference Books Recommended:

- Introduction to Information Technology, V. Rajaraman, PHI publication.
- Fundamental of IT, Leon and Leon, Leon Tec world.
- Introduction to Information Technology, Aksoy and Denardis, Cengage learning. Computers Today, Suresh K. Basandra, Galgotia Publications.
- OFFICE 2013 in Simple Steps, Kogent Solution Inc., DremTech Press.

- Information Technology The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.
- Access 2010 in Simple Steps by Kogent Learning Solutions Inc.

Online Resources:

- Introduction to Computer Fundamental from W3school: https://www.w3schools.blog/computer-fundamentals-tutorial
- Introduction to MS-Word from W3school: https://www.w3schools.blog/ms-word-tutorial
- Introduction to MS-Excel from W3school: https://www.w3schools.com/excel/excel_introduction.php
- Introduction to MS-PowerPoint from W3school: https://www.w3schools.blog/powerpoint-tutorial
- Introduction to MS-Access from W3school: https://www.w3schools.com/sql/sql_ref_msaccess.asp
- Fundamentals of Computers & Information Technology (in Hindi): https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA1-Unit-I-Fundamentals-of-Computers-Information-Technology.pdf.
- Fundamentals of Computers & Information Technology (in Hindi): https://hte.rajasthan.gov.in/dept/dte/board_of_technical_education,_rajasthan/government_polytechnic_college_hanumangarh/uploads/doc/fundamental-final-rkd.pdf.
- Information and Computers Technology: https://cbseacademic.nic.in/web material/doc/2014/11 ICT-IX.pdf.pdf.
- Microsoft Office (in Hindi): https://www.scribd.com/document/534988849/9-Microsoft-office-in-hindi-www-GkNotesPDF-com.
- MS-OFFICE: https://www.rgycsm.org/uploads/books/MICROSOFT-OFFICE-BOOK.pdf.
- MS-OFFICE: Hindi Notes: https://www.copaguide.com/2020/04/ms-office-topics.html.
- Microsoft Office Full Crash Course: https://www.youtube.com/watch?v=SH4oyV5AJ6A

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks:-30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A: Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type question, 1 out of 2 from each unit-4x10=40 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A: Introduction

PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	**Semester-I**	**Session: 2024-2025**

Course Code	**DCA103**	
Course Title	**PROGRAMMING WITH C**	
Prerequisite	As per program	
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Understand programming language and its functionalities. • Understand operators and various conditions and looping statements. • Understand compiler and linker loader. • Understand approaches of programming language.	
Credit Value	**4 Credits**	**1 Credit = 15 Hours - Learning & Observation**
Total Marks	**Max. Marks:100**	**Min marks -40**

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-60 Periods (60 Hours) No. of Topics (Course contents)

Unit	Topics (Course Content)	No. of Period
1	**Introduction** Character set, Identifiers and Keywords, Variables, displaying variables, Reading Variables, Qualifiers, Value initialized variables, Constants, Constant Qualifier, Operators and Expressions, Operator Precedence and Associativity, Basic input output: Single Character I/O, Types of Characters in format string, Scanf with specifier.	15
2	Control Structure: If - statement, If -else statement, Multi decision, Compound Statement, Loops: For-loop, While-loop, Do-While loop,	15

	Break statement, Switch statement, continue statement, go to statement.	
3	**Functions:** Function main, Functions accepting more than one parameter, User defined and library functions, Concept associatively with functions, function parameter, Return value, recursion comparisons of Iteration and recursion variable length argument list. **Arrays:** Scope and Extent, Multidimensional Arrays, Array of Strings, Function in String, passing arrays to functions, accessing array inside functions.	**15**
4	Pointers: Definition and use of pointer, address operator, pointer variable, referencing pointer, void pointers, pointer arithmetic, pointer to pointer, pointer and arrays, pointer and functions, pointers and two-dimensional arrays, array of pointers, pointers constants, pointer and strings.	**15**

PART-C: Learning Resources

Books Recommended:

- Let us C- Yashwant Kanetkar.
- Programming in C-E. Balaguruswamy

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks: -30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A: Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type qts, 1 out of 2 from each unit-4x10=40 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)		**Semester-I**	**Session: 2024-2028**
Course Code	**DUBCAAI02P**		
Course Title	**Computer Fundamentals And Its Applications Lab**		
Course Type	**Practical**		
Prerequisite	**As per PROGRAMME**		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Gain Practical knowledge of MS-Office. • Organize files and documents on storage devices. • Acquire knowledge of ICT and Internet applications. • Develop information technology solutions by evaluating user requirements in advance trends of IT. • Acquire knowledge of MS-Excel, MS-PowerPoint and MS-Access.		
Credit Value	**1Credits**	**1 Credit = 30 Hours – Lab practical's & training**	
Total Marks	**Max. Marks:50**	**Min marks -20**	

PART -B: Content of the Course

Total No. of Learning Training / Performance Periods (01 Hr. per period)-30 Periods (30 Hours)

Module	Topics(Course Content)	No. of Period
List of practical 'sExperiments	**Practical: Based on MS Office** 1. Prepare a word document for inserting picture, bulleting, numbering, formatting, border shading. 2. Prepare document for word art, drop cap, columns, text box, symbols, equation of any mathematical series. 3. To create a resume. 4. Prepare a Power point presentation on a technical topic. 5. Create a student table with the following details: name, address, class attendance, 6. Create a EMPLOYEE data base having D.A.H.R A, income tax, Net Pay a. D.A = 10% of basic pay b. H.R.A – if basic pay is less than 30,000 H.R.A 10% of basic else H.R.A 30% of basic. c. Gross = D.A+H.R.A+Basic Pay d. Provident fund = 12% of basic pay	**30**

Name and Signature of Convener & Members of CBoS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- Computer Fundamentals, P. K. Sinha, BPB Publication, Sixth Edition.
- Fundamentals of Information Technology, Chetan Shrivastava, Kalyan Publishers.
- Fundamentals of Computers, V. Rajaraman, PHI Sixth Edition.
- Computer Fundamentals and Office Automation, Dr. Santosh Kumar Miri, Iterative International Publisher IIP.
- Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publishers, Fifth Edition.
- Fundamentals of Information Technology, Alexis Leonand Mathews Leon, Vikash Publication.

Reference Books Recommended:

- Introduction to Information Technology, V. Rajaraman, PHI publication.
- Fundamental of IT, Leonand Leon, Leon Tecworld.
- Introduction to Information Technology, Aksoy and Denardis, Cengage learning.
- Computers Today, Suresh K. Basandra, Galgotia Publications.
- Information Technology Cathleen Morin, TMH. The breaking wave, Dennis P.Curtin, Kim Foley, Kunai
- OFFICE 2013 in Simple Steps, Kogent Solution Inc., Drem Tech Press.
- Access 2010 in Simple Steps by Kogent Learning Solutions Inc.

Online Resources:

- IntroductiontoComputerFundamentalfromW3school:https://www.w3schools.blog/computer-fundamentals-tutorial
- IntroductiontoMS-WordfromW3school:https://www.w3schools.blog/ms-word-tutorial
- IntroductiontoMS-ExcelfromW3school:https://www.w3schools.com/excel/excel_introduction.php
- IntroductiontoMS-PowerPointfromW3school:https://www.w3schools.blog/powerpoint-tutorial
- Introduction to MS-Access from W3school: https://www.w3schools.com/sql/sql_refmsaccess.asp
- FundamentalsofComputers&InformationTechnology (inHindi):https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA1-Unit-I-Fundamentals-of-Computers-Information-Technology.pdf.
- FundamentalsofComputers&InformationTechnology (inHindi):https://hte.rajasthan.gov.in/dept/dte/board_of_technical_education,_rajasthan/government_polytechnic_college_hanumangarh/uploads/doc/fundamental-final-rkd.pdf.
- InformationandComputers Technology:https://cbseacademic.nic.in/webmaterial/doc/2014/11ICT-IX.pdf.pdf.
- Microsoft Office(inHindi): https://www.scribd.com/document/534988849/9-Microsoft-office-in-hindi-www-GkNotesPDF-com.

- MS-OFFICE: https://www.rgycsm.org/uploads/books/MICROSOFT-OFFICE-BOOK.pdf.
- MS-OFFICE: Hindi Notes: https://www.copaguide.com/2020/04/ms-office-topics.html.
- Microsoft OfficeFullCrashCourse :https://www.youtube.com/watch?v=SH4oyV5AJ6A

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 50 marks
Continuous Internal Assessment (CIA): 15 Marks.
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 15 marks.**
End Semester Exam (ESE):	**Laboratory/field skill performance: on spot Assessment** **A. Performed the task based on lab work- 20 marks** **B. Spotting based on tools & technology(written)-10marks** **C. Viva-voce(based on principle/technology)- 5 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction

PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	Semester-I	Session: 2024-25

Course Code	**BCAAI103P**	
Course Title	**PROGRAMMING IN C LAB**	
Course Type	**Practical**	
Prerequisite	**As per program**	
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Understand programming language and its functionalities. • Understand operators and various conditions and looping statements. • Understand compiler and linker loader. • Understand approaches of programming language.	
Credit Value	**1Credits**	**1 Credit = 30 Hours – Lab practical's & training**
Total Marks	**Max. Marks:50**	**Min marks -20**

PART -B: Content of the Course

Total No. of Learning Training / Performance Periods (01 Hr. per period)-30 Periods (30 Hours)

Module	Topics (Course Content)	No. of Period
List of practical's Experiments	1. Setting–up environment for C programming. 2. Compiler Installations (command line, IDEs). 3. Using IDEs. 4. Displaying various messages onscreen. 5. Programs with simple arithmetic. 6. Programs to display criteria-based results.	**30**

	7. Programs to take input from user. 8. Program to take input based on some criteria. 9. Programs on unit conversions. 10. Programs on iterative operation. 11. Programs to create a numbers series. 12. Programs to check special. 13. Characteristic numbers. 14. Programs to create specific patterns. 15. Programs for creating functions. 16. Programs on recursion. 17. Programs on C preprocessor. 18. Programs on recursion. 19. Programs to use various storage classes. 20. Programs on data type handling and conversion. 21. Programs to introduce Pointers. 22. Programs on handling Array. 23. Programs on matrix calculations. Note: Concerned teacher can add additional experiment as per requirement	

PART-C: Learning Resources

Books Recommended:

- Let us C- Yashwant Kanetkar.
- Programming in C-E. Balaguruswamy

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 50 marks
Continuous Internal Assessment (CIA): 15 Marks.
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 15 marks.**

End Semester Exam (ESE):	**Laboratory/field skill performance: on spot Assessment** **A. Performed the task based on lab work- 20 marks** **B. Spotting based on tools & technology(written)-10marks** **C. Viva-voce (based on principle/technology)- 5 marks**

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF GEOGRAPHY
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)		**Semester-I**	**Session: 2024-2028**
Course Code	**DUGEODSC-104 T**		
Course Title	**Fundamental of Physical Geography**		
Course Type	**GE (General Elective)**		
Prerequisite	As per Programme		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** ➢ Understand the functioning of Earth systems and analyze geo morphological, climatic and oceanic factors. ➢ Understand the Physical aspect of Geographical concepts which are relevant in day to day life ➢ To record the temperature, pressure, humidity, rainfait and other climatic conditions and evaluate the local climate ➢ Understand the Oceanic Features and Conditions		
Credit Value	**3 Credits**	**1 Credit = 15 Hours - Learning & Observation**	
Total Marks	**Max. Marks:100**	**Min marks -40**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-60 Periods (60 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	**Fundamental of Physical Geography-** Definition and Scope of Physical Geography, Origin of the Earth-Nebular Timary, Hoyle and Littleton Theory. Interior of the earth:- Composition and Structure. Folds and Faul's-Origin and Classification	12
II	**Rocks:** Origin, Classification and Characteristics. cache.ing-Meaning, Types. Agents of Erosion- Winds, River and their resultant topographical features	10
III	**Atmosphere Elements of Weather and Climate**, Composition of the At-	12

	mosphere, Atmospheric Temperature, Pressure Belt, winds, Tropical Cyclone and Origin and Mechanism and mansoon .	
IV	**Hydrosphere-Relief of the Ocean Basins**-Tetrahedral theory. Hydrological Cycle, Ocean Salinity, Ocean Temperature-vertical and horizontal Distribution, Ocean Currents (Pacific and Indian) .	**11**

Name and Signature of Convener & Members of CBS

PART-C: Learning Resources

Text Books, Reference Books and Others

1. A.H. Strahler, Arthur Strahler, Introducing Physical Geography, John Wiley & Sons, New York, 2005
2. Strahler, A.N. and Strahler, A.H., Modern Physical Geography; John Wiley & Sons, 1992
3. Thornbury, W.D., Principles of Geomorphology, Wiley Eastern, 1969
4. Critchfield, H., General Climatology, Prentice-Hall, New York, 1975.
5. Savindra Singh- Physical Geography (Hindi and English Both) Prawalika Publication Prayagraj
6. Lal D.S.- Physical Geography, (Hindi) Sharda Pustak Bhavan, Prayagraj, 2012

Books Recommended-

1. Lal D.S.- Climatology & Oceanography (Hindi and English Both) Sharda Pustak Bhavan Prayagraj
2. Mazid Husain- Bhautik Bhoogol, Rawat Publication, Jaipur, 2019
3. Alka Gautam- Bhautik Bhoogol, Rastogi Publication, Meerut, 2012

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks:-30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A:Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type questions, 1 out of 2 from each unit-4x10=40 marks**	

Name and Signature of Convener & Members of CBoS.

श्री Davara University

Established under Chhattisgarh Private Universities (Establishment and Operation) Act, 2005

FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF GEOGRAPHY
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)		**Semester-I**	**Session: 2024-25**
Course Code	**DUGEO104P**		
Course Title	**Cartography Tools And Techniques Lab**		
Course Type	**Practical**		
Prerequisite	**As per program**		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** 1-Understand the basic concepts of cartography 2- Learn and prepare the different kinds of maps. 3- Recognize basic themes of map making 4- Develop an idea about different types of thematic mapping techniques.		
Credit Value	**1Credits**	**1 Credit = 30 Hours – Lab practical's & training**	
Total Marks	**Max. Marks:50**	**Min marks -20**	

PART -B: Content of the Course

Total No. of Learning Training / Performance Periods (01 Hr. per period)-30 Periods (30 Hours)

Module	Topics (Course Content)	No. of Period
List of practical's Experiments	1. History of Cartography, Indian cartography, Modern cartography, Drawing Equipment's. 2. Characteristics Features of Map, classification of maps, Mapping methods Tools of Map Making, Type of printed Shades. 3. Enlargement, Reduction and Combination of Maps- Graphical and Mechanical Methods.	**30**

PART-C: Learning Resources

Books Recommended:

- Sharma, J.P. (2001): Prayogik Bhugol., Rastogi Publication, Meerut 3rd edition.
- Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions).
- Sharma, J.P. (2001): Prayogik Bhugol., Rastogi Publication, Meerut 3rd edition.
- Haroon, M., Practical Geography, Mishra Trading Corporation, Varanasi,2010
- Chauhan, P R. 2005, Practical Geography, Vasundhara Prakashan, Gorakhpur
- stiyak.M. 1989, A Textbook of Practical Geography, Heritage Publication New Delhi

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 50 marks

Continuous Internal Assessment (CIA): 15 Marks.

End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 15 marks.**
End Semester Exam (ESE):	**Laboratory/field skill performance: on spot Assessment** **A. Performed the task based on lab work- 20 marks** **B. Spotting based on tools & technology(written)-10marks** **C. Viva-voce (based on principle/technology)- 5 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)		**Semester-I**	**Session: 2024-2028**
Course Code	**BBA3003**		
Course Title	**Cost Accounting**		
Course Type	**GE (General Elective)**		
Prerequisite	As per PROGRAMME		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** 1. Determine various types of cost of production. 2. Compute unit cost and total cost of production and prepare cost statement. 3. Compute employee cost, employee productivity, and employee turnover. 4. Determine cost under job costing, batch costing, process costing, contract costing and service costing. 5. Apply activity-based costing for cost determination.		
Credit Value	**4 Credits**	**1 Credit = 15 Hours - Learning & Observation**	
Total Marks	**Max. Marks:100**	**Min marks -40**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-60 Periods (60 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	Cost: Meaning, Concept and Classification. Elements of Cost, Nature & Importance, Material Costing. Methods of Valuation of Material issue. Concept and material control and its techniques. Labour Costing, Methods of Wages payments.	15
II	Costing, Preparation of Cost Sheet and Statement of Cost (Including calculation of tender price) Overhead costing, (Including calculation of machine hour rate.)	15

III	Contract and Job costing, operating costing Process Costing (Including Inter process profit and Reserve). Reconciliation of Cost and Financial Accounts.	**15**
IV	Marginal Costing- Profit – Volume Ratio, Break – Even Point, Margin of Safety, Application of Break-even Analysis. Cost Audit – Meaning, Importance and Techniques of Cost Audit, Cost Audit Programme.	**15**

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PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

Text Books Recommended –

- R.K. Gupta, Principles and Practice of Cost Accounting, Agra Book Stores.
- Nigam H- Principles and Practice of Cost Accounting, S.Chand & Co. New

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks:-30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A:Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type questions, 1 out of 2 from each unit-4x10=40 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)		**Semester-I**	**Session: 2024-2028**
Course Code	**DUVAC-01**		
Course Title	**Fundamental of Stock Market**		
Course Type	**VAC (Value Addition Course)**		
Prerequisite	**As per PROGRAMME**		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Explain the concepts of investment and understand the Indian securities market environment. • Understand the modus operandi of Stock market and regulatory framework of SEBI. • Describe various techniques of analyzing securities under		
Credit Value	**2 Credits**	**1 Credit = 30 Hours – Lab practical's & training**	
Total Marks	**Max. Marks: 50**	**Min marks -20**	

PART -B: Content of the Course

Total No. of Learning Training / Performance Periods (01 Hr. per period)-30 Periods (30 Hours)

Unit	Topics(Course Content)	No. of Period
I	Introduction of Investment- meaning, scope, and its types. Primary Market - meaning, importance, and its instrument, the role of SEBI in the stock market.	8
II	Secondary Market- meaning importance, and its instruments. National Security Depository Limited- Introduction, Management, benefits.	7
III	Safety measures taken by NSDL, Services offered, Depository Act 1996- benefits, depository participant, dematerialization,	8
IV	Investment, SEBI, Depository Act 1996, Derivative, Secondary Market. Foreign Direct Investment	7
Keywords		

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PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended –

- Dr.Agrawal & Kumar, SBPD Publishing House Agra (Hindi Medium)
- Prof.V.P.Agrawal, Sahitya Bhawan Publications. Agra(Hindi Medium)

- Dr.Bimal Jaiswal & B.Venkatraman, Sahitya Bhawan Publications, Agra (English)
- Dr.I.M.Sahai,SBPD Publishing House, Agra English Medi

Reference Books Recommended-

- The little book of common sense investing by Jack Bogle
- A random walk down wall street by Burton g. Malkiel
- The warren buffet way by Robert g. Hagstrom

Note: learners are advised to use latest edition of text books.

E-resources:

- The Psychology of Money
- The Intelligent Investor
- One Up on Wall Street
- The Little Book That Still Beats the Market
- Common Stocks and Uncommon Profis

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 50 marks
Continuous Internal Assessment (CIA): 15 Marks.
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 15 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A: Q1. Objective-3 marks; Q2. Short answer type-3x4=12 marks Section B: Descriptive answer type questions, 1 out of 2 from each unit-4x5=20 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART- A: Introduction

PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	Semester-I	Session-2024-28

Course Code	**DUENGAEC-01**	
Course Title	**Communicative English**	
Course Type	**AEC (Ability Enhancement Course)**	
Prerequisite	**As per PROGRAMME**	
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able to** • Understand and apply the use of Articles and Tenses in day to day life. • Analyze the power of imagination and creativity and critically appreciate the poems. • Identify and develop different types of writing skills. • Appreciate and value the use of idioms and phrases as enriching elements of language expression.	
Credit Value	**2 Credit**	**Credit = 15 hours – learning and observation**
Total Marks	**Max. Marks:50**	**Min. Marks:20**

PART -B: Content of the Course

Total No. of Teaching-learning Periods(01 Hr. per period) 30 Periods (30 Hours)

Unit	Topics(Course Content)	No. of Period
I	**Prose:** 1. Darshana Dholakia:Baa-My Mother- A Person, A Woman 2. Anita Desai :A Devoted Son 3. Rabindranath Tagore: The Home Coming	**08**
II	**Poetry:** William Wordsworth: The Solitary Reaper Robert Lee Frost: Stopping by the Woods on a Snowy Evening	**07**
III	**Letter Writing** 1. Formal Letter 2. Informal Letter **Composition** 1. Describing a Place or a Person 2. Writing a Biographical Sketch 3. Narrating an Event or Experience	**08**
IV	**Writing Skills** Word Formation, Idioms and Phrases Coordination and Subordination, One Word Substitutes **Grammar :**	**07**

	1. Articles 2. Tenses	
Keywords	Love, admire, alone, devote, solitary, frozen lake, darkest evening	

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PART-C: Learning Resources

Text Books, Reference Books and Others

Text Book:

1. Flamingo: A textbook for college students publication: Macmillan Publishers.

Reference Books:

1. Essential English Grammar, 2nd Edition by Raymond Murphy, Cambridge Publication
2. English Grammar in use 5th Edition by Raymond Murphy, Cambridge Publication
3. Advanced English Grammar by Martine Hewings Cambridge University Press.

Online Resources

e-Resources /e-books and e-learning portals
i) https://enelishsummary.com/devoted-son-summary-anita=desai
ii) https://litmarked.com/the-homecoming-by-rabindranath-tagore-summary
iii) https://www.litcharts.com/poctrv/william-wordsworth/thesolitary-reaper
iv) https://www.sparknotes.com/poetry/frost/section10
v) https://www.wikihow.com/Write-a-Biographical-Sketch
vi) https://study.com/learn/lesson/composition-writing-rules-format.html
vii) https://www.thelearninglab.com.sg/blog/2021/02/how-to-write-an-impressive- composition/

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 50 marks
Continuous Internal Assessment (CIA) 15 marks
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz –(2): 10 & 10 Assignment / Seminar + Attendance – 05 Total Marks - 15	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against **15** marks
End Semester Exam (ESE):	**Two section- A&B** **Section A: Q1. Objective-3 marks; Q2. Short answer type-3x4=12 marks** **Section B: Descriptive answer type questions, 1 out of 2 from each unit-4x5=20 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2024-28)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART- A: Introduction

PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	Semester-I	Session-2024-28

Course Code	**DUAC-01**	
Course Title	**Bridge Course**	
Course Type	**Additional Subject(Only for Non-Mathematics students)**	
Prerequisite	**As per PROGRAMME**	
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Analyze logical propositions. • Understand sets and perform operations and algebra on sets. • Determine properties of relations; identify equivalence and partial order relations. • Understand permutation, Trigonometry. • Understand the combination, Geometry, Statistics.	
Total Marks	**Max. Marks:50**	**Min. Marks:20**

PART -B: Content of the Course

Unit	Topics (Course Content)	No. of Period
1	**Algebra:** Partial fractions, Arithmetic Progression & Geometric Progression. Determinants and matrices, Inverse matrix.	7
2	**Permutation**: combination, method of induction, Binomial Theorem for positive integral index. And any index (without proof), Exponential and logarithmic series.	8
3	**Trigonometry:** Measurement of angles, Trigonometric ratios, simple formula, compound angles, Trigonometric ratios of multiple and sub multiple angles. Height and Distance, Inverse Function	7
4	**Geometry:** Locus, Cartesian coordinate system, Distance formula, Section formula, Slope of a straight-line various forms, Angle between two lines, pair of straight lines, parabola, ellipse and hyperbola.	5
5	**Statistics:** Frequency Distribution, Measures of central tendency, Mean. Median, Mode, G.M., H.M., Interquartile range, Mean deviation, Standard deviation.	8
Keywords	**Algebra, Permutation, Trigonometry, geometry, statistics.**	

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PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- Mathematic (class XI and XII)
- R.D.SHARMA YOUGBODH Mathematics, (class XI and XII)

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 50 marks
Continuous Internal Assessment (CIA)15 marks
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz –(2): 10 & 10 Assignment / Seminar + Attendance – 05 Total Marks - 15	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against **15** marks
End Semester Exam (ESE):	**Two section- A&B** **Section A: Q1. Objective-3 marks; Q2. Short answer type-3x4=12 marks** **Section B: Descriptive answer type questions, 1 out of 2 from each unit-4x5=20 marks**	

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SEMESTER-II

Programme Curriculum

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SEMESTER II

S.NO	COURSE CODE	COURSE TITLE	TEACHING HOURS PER WEEK				EXAMINATION SCHEME				
							THEORY		PRACTICAL		TOTAL MARKS
DISCIPLINE SPECIFIC COURSE			L	T	P	C	EX	IN	EX	IN	
1.	DUBCAI-201	Computer Network	4	-	0	4	70	30	-	-	100
2.	DUBCAI-202T	OOP with C++	3	-	0	3	70	30	-	-	100
3.	DUBCAI-203T	Data Base Management System	3	-	0	3	70	30	-	-	100
GENERAL ELECTIVE											
4.	DUBCAI-204	Fundamental of Human Geography	3	-	0	3	70	30	-	-	100
ABILITY ENHANCEMENT COURSE											
5.	DUBCAI-205	Hindi	2	-	-	2	35	15	-	-	50
SKILL ENHANCEMENT COURSE											
6.	DUBCAI-206	Discrete Mathematics II	2	-	-	2	35	15	-	-	50
PRACTICAL LAB											
7.	DUBCAI-202P	OOP with C++ Lab	-	-	2	1	-	-	35	15	50
8.	DUBCAI-203P	Data Base Management System Lab	-	-	2	1	-	-	35	15	50
9.	DUBCAI- 204P	Scale and Representation of Relief	-	-	2	1	-	-	35	15	50
Total Credit: 20							Total Marks: 650				

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	**Semester-II**	**Session: 2025-2029**	
Course Code	**DUBCAI-201**		
Course Title	**Computer Network**		
Course Type	**DSC (Discipline Specific Course)**		
Prerequisite	**As per PROGRAMME**		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Analyze Network Architectures and Protocol Models • Design and Implement Network Topologies and Hardware • Execute Advanced IP Addressing and Subnetting Schemes • Secure and Optimize Network Communication and Protocols		
Credit Value	**4 Credits**	**Credit-15 Hours - Learning & Observation**	
Total Marks	**Max. Marks:100**	**Min marks -40**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-60 Periods (60 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	**Introduction to Computer Networking & Transmission of Digital Data** Data Communication, Networks - Distributed Processing, Network Criteria, Applications; Protocols and Standards, Standard Organization, Line Configuration - Point to Point, Multi Point, Topology - Mesh, Star, Tree, Bus, Ring, Hybrid; Transmission mode, Categories of Network - LAN, MAN WAN. Inter Networks **Transmission of Digital Data** Analog and Digital, digital data transmission - parallel transmission, serial transmission, standards, modems- Transmission rate, Modem standards	15
II	**The OSI Model** ISO organization, The model - Layered architecture, functions of the layers -Physical layer, Data Link layer, Network layer, Transport layer, session layer, Presentation layer, Application layer	15
III	**TCP/IP Model & Protocols** The TCP/IP reference model. Comparison of TCP/IP & OSI, Introduction to Internet - ARPANET. Architecture of Internet. Client server model, www, IP Address Classes, Protocols: IP, HTTP, TCP. FTP, ARP.	15

IV	**Network Security** Introduction of Network Security and its importance. Cryptography: Definitions, Symmetric Key Cryptography: Traditional Ciphers, Simple modern Ciphers, Asymmetric Key Cryptography RSA, Security Services, Digital Signatures.	**15**

Name and Signature of Convener & Members of CBS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- **Data Communications and Networking** by *Behrouz A. Forouzan*
- **Computer Networking: A Top-Down Approach** by *James Kurose and Keith Ross*
- **Computer Networks** by *Andrew S. Tanenbaum*

Reference Books Recommended:

- **TCP/IP Illustrated, Volume 1: The Protocols** by *Kevin R. Fall and W. Richard Stevens*
- **CCNA 200-301 Official Cert Guide** by *Wendell Odom*

NPTEL Courses

- Computer Networks by Prof. Sujoy Ghosh (IIT Kharagpur) nptel.ac.in/courses/106105081
- Data Communication by Prof. Ajit Pal (IIT Kharagpur) nptel.ac.in/courses/106105082
- Demystifying Networking - Course https://onlinecourses.nptel.ac.in/noc25_cs125/preview
- https://www.netacad.com/resources/lab-downloads
- https://www.wireshark.org/download.html

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks:-30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A: Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type question, 1 out of 2 from each unit-4x10=40 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)		**Semester-II**	**Session: 2025-2029**
Course Code	**DUBCAI-202**		
Course Title	**OOP with C++**		
Course Type	**DSC (Discipline Specific Course)**		
Prerequisite	As per Programme		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Design and Implement Modular Systems using Classes and Objects • Construct Hierarchical Structures through Inheritance and Abstraction • Apply Polymorphic Behavior and Data Encapsulation • Build Fault-Tolerant Applications with Data Persistence		
Credit Value	**3 Credits**	**Credit-15 Hours - Learning & Observation**	
Total Marks	**Max. Marks:100**	**Min marks -40**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-45 Periods (45 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	**Foundations of OOP – Classes and Objects:** Introduction to Object Oriented Programming: Concept of object oriented Programming, Features C++, Structure of C PROGRAMME, Data types, structure, class and objects, Access Specifies: Private, Public, Protected, inline functions, static data and static functions. The OOP Philosophy, Class Anatomy, Object Lifecycle, Access Control.	12
II	**Constructor, Inheritance and Abstraction:** Constructor: Default constructor, Copy constructor, Parameterized constructor, Destructor Constructors, Destructors, The this Pointer, Static Members, Constant Members, Friendship in C++ Inheritance: Definition, Concept of base and derived class, Types of Inheritance: Single, Multilevel, and Multiple. Hierarchical and Hybrid	11
III	**Polymorphism & Encapsulation, Exception Handling:** Inheritance Polymorphism: Definition, Compile time polymorphism: Function overloading. Operator overloading, constructor overloading, Runtime polymorphism: Virtual Function, pure virtual function. Inline function, friend	11

	function, friend class Introduction to Exceptions, The throw Mechanism, Multiple Catch Blocks, Exception Specifications with try and Catch block with Example.	
IV	**File Handling I/O Method:** Input-Output and File Handling: VO classes, File and Stream classes, Char 1/0, String 1/0, Object I/O, File Pointer, Opening and Closing file. Exception Handling and Standard Template Library: Definition, Exception basics, try, catch and throws keywords, Template.	**11**
Keywords	Webpage, HTML, AJAX, CSS, JavaScript, PHP, MySQL.	

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PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- **Object-Oriented Programming with C++** by *E. Balagurusamy*
- **The C++ Programming Language** by *Bjarne Stroustrup*
- **C++: The Complete Reference** by *Herbert Schildt*

Reference Books Recommended:

- **Effective C++** by *Scott Meyers*
- **C++ How to Program** by *Deitel & Deitel*

- Programming in C++ by Prof. Partha Pratim Das (IIT Kharagpur) nptel.ac.in/courses/106105151
- Object Oriented System Design by Prof. Rajib Mall (IIT Kharagpur) nptel.ac.in/courses/106105153
- Learn C++ – Skill up with our free tutorials https://www.learncpp.com/
- Object Oriented Programming in C++ - GeeksforGeeks https://www.geeksforgeeks.org/cpp/object-oriented-programming-in-cpp/
- cplusplus.com/reference/
- Compiler Explorer https://godbolt.org/

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks:-30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A: Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type question, 1 out of 2 from each unit-4x10=40 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A: Introduction

PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	Semester-II	Session: 2025-2029

Course Code	**DUBCAI-203T**	
Course Title	**Data Base Management System**	
Course Type	**DSC (Discipline Specific Course)**	
Prerequisite	**As per PROGRAMME**	
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Design Conceptual and Relational Data Models • Optimize Database Schema through Normalization • Execute Advanced Data Manipulation and Automation via SQL • Manage Transaction Integrity and Performance Tuning.	
Credit Value	**3 Credits**	**Credit-15 Hours - Learning & Observation**
Total Marks	**Max. Marks:100**	**Min marks -40**

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-45 Periods (45 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	**Database Architecture & Data Modeling** Introduction to Databases , DBMS vs. RDBMS, Data Models, Database Architecture, Data Independence, Entity-Relationship (ER) Modeling, Relationship Cardinality, Relationship Cardinality, Advanced ER Features, ER-to-Relational Mapping, Constraints, Relational Algebra	10
II	**Relational Design & Normalization** Pitfalls of Bad Design, Functional Dependencies, Inference Rules, Closure of Attribute Sets, Normal Form De-normalization.	10
III	**SQL Mastery – Queries & Advanced Operations** **Introduction to SQL:** DDL (Define), DML (Manipulate), and DCL (Control) , **Basic Queries:** SELECT, WHERE, and DISTINCT clauses, Aggregate Functions, Filtering Groups, Set Operations, Joins, Nested Sub-queries, Advanced SQL, Views, Triggers, SQL Optimization	10
IV	**Transactions, Concurrency & Indexing**	15

	Transaction Concepts (ACID), Schedules, Recoverability: Cascading vs. Cascadeless rollbacks, **Concurrency Problems:** Dirty Reads, Lost Updates, and Unrepeatable Reads, **Locking Protocols:** 2-Phase Locking (2PL) and its variations, **Deadlocks:** Detection, Prevention, and Avoidance strategies, **Timestamp Ordering:** Using system clocks to manage concurrency, **Indexing Fundamentals:** How indexes speed up data retrieval, **Primary vs. Secondary Indexes:** Dense vs. Sparse indexing, **B-Trees and B+ Trees:** The data structures behind database indexing, **Hashing Techniques:** Static vs. Dynamic hashing for fast lookups, **Recovery Systems:** Log-based recovery and Checkpoints	

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PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- **Database System Concepts** by *Silberschatz, Korth, and Sudarshan*
- **Fundamentals of Database Systems** by *Elmasri and Navathe*

Reference Books

- **Database Management Systems** by *Raghu Ramakrishnan and Johannes Gehrke*
- **SQL Queries for Mere Mortals** by *John Viescas*

Online Resources:

- Database Management System by Prof. Partha Pratim Das (IIT Kharagpur) nptel.ac.in/courses/106105175
- Data Base Management Systems by Prof. Kajal Nayak (IIT Kharagpur) https://nptel.ac.in/courses/106105046
- SQLZoo.net https://sqlzoo.net/wiki/SQL_Tutorial
- DBMS Tutorial - GeeksforGeeks https://www.geeksforgeeks.org/dbms/dbms/

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks:-30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A:Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type qts, 1 out of 2 from each unit-4x10=40 marks**	

Name and Signature of Convener & Members of CBoS.

श्री Davara University

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	**Semester-II**	**Session: 2025-2029**	
Course Code	**DUBCAI-202P**		
Course Title	**OOP with C++ Lab**		
Course Type	**Practical**		
Prerequisite	**As per Programme**		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Design and Implement Fundamental Object Blueprints • Construct Complex Hierarchical Architectures • Utilize Static and Dynamic Polymorphism • Develop Fault-Tolerant Systems with Persistent Storage		
Credit Value	**1 Credits**	**Credit-30 Hours – Lab practical's & training**	
Total Marks	**Max. Marks:50**	**Min marks -20**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-45 Periods (45 Hours) No. of Topics (Course contents)

Module	Topics(Course Content)	No. of Period
List of Practical Experiments	• Create a **Student** class to store and display name, roll number, and marks. • Calculate the area of a **Rectangle** using parameterized constructors and destructors. • Implement a **String** class with a copy constructor to perform deep copying. • Use **Static Data Members** to count the total number of objects created for a class. • Add private data of two different classes using a **Friend Function**. • Demonstrate **Single Inheritance** by deriving a 'Programmer' class from an 'Employee' base class. • Implement **Multilevel Inheritance** using 'Person', 'Student', and	**30**

	'GraduateStudent' classes. • Use **Multiple Inheritance** to combine 'Faculty' and 'Research' data into a 'Professor' class. • Resolve the **Diamond Problem** using virtual base classes in a 'Shape' hierarchy. • Create an **Abstract Class** 'Media' with a pure virtual function to display file details. • Perform **Function Overloading** to calculate the area of circles, rectangles, and triangles. • Overload the **binary + operator** to add two complex number objects. • Overload the **unary - operator** to negate the coordinates of a 'Point' object. • Demonstrate **Runtime Polymorphism** using a base class pointer and virtual functions. • Implement a **Secure Bank Account** class using private members and public getter/setter methods. • Handle **Divide by Zero** errors using try, throw, and catch blocks. • Create a program to handle **Multiple Exceptions** (e.g., array index out of bounds and null pointers). • Write a C++ program to **Write and Read** user details to a text file.Note: Concerned teacher can add additional experiment as per requirement	

Name and Signature of Convener & Members of CBoS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books, Reference Books and Others

- **Object-Oriented Programming with C++** by *E. Balagurusamy*
- **C++: The Complete Reference** by *Herbert Schildt*

Reference Books

- **The C++ Programming Language** by *Bjarne Stroustrup*
- **Effective C++** by *Scott Meyers*

Online Resources

- Programming in C++ by Prof. Partha Pratim Das (IIT Kharagpur) nptel.ac.in/courses/106105151
- Object Oriented System Design by Prof. Rajib Mall (IIT Kharagpur) nptel.ac.in/courses/106105153

- Learn C++ – Skill up with our free tutorials https://www.learncpp.com/
- Object Oriented Programming in C++ - GeeksforGeeks https://www.geeksforgeeks.org/cpp/object-oriented-programming-in-cpp/
- cplusplus.com/reference/

Compiler Explorer https://godbolt.org/

Suggested Continuous Evaluation Methods:

Maximum Marks: 50 marks

Continuous Internal Assessment (CIA): 15 Marks.

End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 15 marks.**
End Semester Exam (ESE):	**Laboratory/field skill performance: on spot Assessment** **A. Performed the task based on lab work- 20 marks** **B. Spotting based on tools & technology(written)-10marks** **C. Viva-voce(based on principle/technology)- 5 marks**	

Name and Signature of Convener & Members of CBoS.

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction

PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	**Semester-II**	**Session: 2025-2029**

Course Code	**DUBCAI-203P**	
Course Title	**Data Base Management System Lab**	
Course Type	**Practical**	
Prerequisite	**As per Programme**	
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Design and Implement Relational Schemas with Integrity • Construct Complex Data Queries and Reports • Implement Database Automation and Security Layers • Manage Transactional Integrity and Performance Tuning	
Credit Value	**1 Credits**	**Credit-30 Hours – Lab practical's & training**
Total Marks	**Max. Marks:50**	**Min marks -20**

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-45 Periods (45 Hours) No. of Topics (Course contents)

Module	Topics(Course Content)	No. of Period
	1. **Schema Design:** Create a database for a **Library Management System** and define tables for Books, Authors, and Members. 2. **Table Creation:** Write a script to create an `Employees` table with appropriate constraints (`Primary Key`, `Not Null`, `Unique`). 3. **Altering Structures:** Use the `ALTER` command to add a 'Date of Birth' column and modify the data type of an existing column. 4. **Relationship Mapping:** Create a 'Sales' table that implements a **Foreign Key** referencing a 'Products' table with `ON DELETE CASCADE`. 5. **ER Modeling:** Draw a complete **ER Diagram** for a Hospital Management System, identifying all entities and relationship cardinalities. 6. **Data Entry:** Perform bulk insertion of records into a 'Students' table and practice updating specific records based on a condition. 7. **Basic Retrieval:** Use the `SELECT` and `DISTINCT` keywords to retrieve a list of unique cities where customers are located. 8. **Pattern Matching:** Find all employees whose names start with 'A' or have 'son' in the middle using the `LIKE` operator and wildcards.	

9. **Conditional Filtering:** Use `WHERE` clauses combined with `AND`, `OR`, and `BETWEEN` to find products priced between $50 and $200.
10. **Sorting Data:** Retrieve a list of students sorted by 'Grade' in descending order and 'Name' in ascending order.
11. **Aggregate Reporting:** Use `COUNT`, `SUM`, and `AVG` to find the total number of orders and the average order value per month.
12. **Grouping Logic:** Apply `GROUP BY` and `HAVING` to list departments that have an average salary greater than $50,000.
13. **Inner Joins:** Combine 'Orders' and 'Customers' tables to display the Customer Name and Order Date for every transaction.
14. **Outer Joins:** Use a `LEFT JOIN` to find all customers, including those who have never placed an order.
15. **Sub-queries:** Write a query to find the names of employees who earn more than the overall average company salary.
16. **View Creation:** Create a **Virtual Table (View)** that displays only the non-sensitive details of a 'Payroll' table for HR use.
17. **Automated Triggers:** Implement a **Trigger** that automatically decreases the 'StockQuantity' in a 'Products' table whenever a new 'Sale' is recorded.
18. **Transaction Control:** Demonstrate the use of `COMMIT` and `ROLLBACK` by simulating a fund transfer between two bank accounts.
19. **Indexing for Speed:** Create a **B-Tree Index** on a frequently searched column (like 'Email') and compare query execution times.
20. **Normalization Exercise:** Take a denormalized "Student Report" spreadsheet and decompose it into **3rd Normal Form (3NF)** tables.

Note: Concerned teacher can add additional experiment as per requirement

Name and Signature of Convener & Members of CBoS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books, Reference Books and Others

- **SQL Cookbook** by *Anthony Molinaro*
- **Database System Concepts** by *Silberschatz, Korth, and Sudarshan*
- **Learning SQL** by *Alan Beaulieu*

Reference Books

- **High Performance MySQL** by *Silvia Botros & Jeremy Tinley*
- **SQL Queries for Mere Mortals** by *John Viescas*

- Database Management System by Prof. Partha Pratim Das (IIT Kharagpur) nptel.ac.in/courses/106105175
- Data Base Management Systems by Prof. Kajal Nayak (IIT Kharagpur) https://nptel.ac.in/courses/106105046

- SQLZoo.net https://sqlzoo.net/wiki/SQL_Tutorial
- DBMS Tutorial - GeeksforGeeks https://www.geeksforgeeks.org/dbms/dbms/

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 50 marks
Continuous Internal Assessment (CIA): 15 Marks.
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 15 marks.**
End Semester Exam (ESE):	**Laboratory/field skill performance: on spot Assessment** **A. Performed the task based on lab work- 20 marks** **B. Spotting based on tools & technology(written)-10marks** **C. Viva-voce(based on principle/technology)- 5 marks**	

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF COMPUTER APPLICATION
COURSE CURRICULUM

PART-A:Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)		**Semester-II**	**Session: 2025-2029**
Course Code	**DUBCAI-206**		
Course Title	**Discrete Mathematics II**		
Course Type	**SEC (Skill Enhancement Course)**		
Prerequisite	**As per Programme**		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Apply Formal Logic and Proof Methodologies • Analyze Relational and Functional Structures • Evaluate Combinatorial Patterns and Recursive Models • Implement Graph Theory and Tree Algorithms.		
Credit Value	**2 Credits**	**1 Credit-15 Hours - Learning & Observation**	
Total Marks	**Max. Marks:100**	**Min marks -40**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-60 Periods (60 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	**Logic and Proof Techniques** **Propositional Logic:** Declarative statements, connectives (AND, OR, NOT), and truth tables, **Logical Equivalences:** Tautologies, contradictions, and De Morgan's Laws, **Predicates and Quantifiers:** Universal (∀) and Existential (∃) quantification, **Rules of Inference:** Validating arguments using Modus Ponens and Modus Tollens, **Introduction to Proofs:** Direct proofs and proof by contraposition, **Proof by Contradiction:** Proving irrationality and the infinitude of primes	**7**
II	**Relations, Functions, and Algebraic Structures** **Set Theory Review:** Operations, power sets, and Cartesian products, **Relations:** Definition, representation via matrices, and directed graphs, **Properties of Relations:** Reflexivity, symmetry, transitivity, and anti-symmetry, **Equivalence Relations:** Partitions and equivalence classes, **Partial Orderings:** Posets and Hasse Diagrams, **Functions:** Injective (one-	**8**

	to-one), Surjective (onto), and Bijective mappings, **Composition of Functions:** Inverse functions and operations on functions, **Growth of Functions:** Big-O notation and complexity basics.	
III	**Combinatorics and Recurrence Relations** **Basic Counting:** The Sum Rule, Product Rule, and Inclusion-Exclusion, **Permutations:** Arranging distinct and non-distinct objects, **Combinations:** Selecting subsets and the Binomial Theorem, **Advanced Combinatorics:** The Pigeonhole Principle and its applications, **Recurrence Relations I:** Modeling problems (Tower of Hanoi, Fibonacci), **Solving Recurrences I:** The Method of Characteristic Roots for linear homogeneous relations, **Solving Recurrences II:** Non-homogeneous relations and particular solutions, **Divide-and-Conquer Recurrences:** Introduction to the Master Theorem.	**8**
IV	**Graph Theory and Trees** **Graph Fundamentals:** Types of graphs (simple, multigraphs, directed) and terminology, **Graph Representation:** Adjacency matrices and adjacency lists, **Connectivity:** Paths, cycles, and connected components, **Euler and Hamiltonian Paths:** The Seven Bridges of Königsberg problem and circuit criteria, **Shortest Path Algorithms:** Introduction to Dijkstra's Algorithm, **Introduction to Trees:** Properties of trees and Rooted Trees, **Tree Traversals:** Pre-order, In-order, and Post-order traversal, **Spanning Trees:** Prim's and Kruskal's algorithms for Minimum Spanning Trees (MST)	**7**
Keywords	Artificial Intelligence (AI), AI Agent, Sate Space, Production System. LISP, PROLOG, Knowledge Representation, Semantic Net, Propositional Logic, Expert System.	

Name and Signature of Convener & Members of CBS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

Text Books Recommended:

- **Discrete Mathematics and its Applications** by *Kenneth H. Rosen*
- **Discrete Mathematical Structures** by *Bernard Kolman, Robert Busby, and Sharon C. Ross*

Reference Books

- **Concrete Mathematics** by *Ronald Graham, Donald Knuth, and Oren Patashnik*
- **Elements of Discrete Mathematics** by *C.L. Liu*

Online Resources

- **Discrete Mathematics by Prof. Sudarshan Iyengar (IIT Ropar)** nptel.ac.in/courses/106106183
  - **Discrete Structures by Prof. Dipanwita Roychoudhury (IIT Kharagpur)** nptel.ac.in/courses/106105192

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 50 marks
Continuous Internal Assessment (CIA): 15 Marks.
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered**

		against 15 marks.
End Semester Exam (ESE):	**Two section- A&B** **Section A: Q1. Objective-05 marks: Q2. Short answer type-5x2=10 marks** **Section B: Descriptive answer type question, 1 out of 2 from each unit-4x5=20 marks** **Total = 35 marks**	
Name and Signature of Convener & Members of CBoS.		

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF HINDI
COURSE CURRICULUM

PART-A: Introduction

PROGRAMME: Department of Science (BCA, B.Sc., FD, FS) (Certificate/Diploma/Degree Honors)	Semester-II	Session:2025-2029

Course Code	**DUHIAEC-01**	
Course Title	**Hindi**	
Course Type	**AEC (Ability Enhancement Course)**	
Pre-requisite(if any)	**As per PROGRAMME**	
Course Learning Outcomes (CLO)	1- विद्यार्थीहिन्दीभाषा एवंव्याकरणसंबंधीज्ञान से समृद्ध होंगे। 2- भाषाज्ञान के माध्यम से भारतीय संस्कृति एवंभावनात्मक एकता के महत्वको समझने की क्षमताविकसितहोसकेगी। 3- मुहावरे एवंलोकोक्तियाँ का महत्व समझसकेंगे। 4- व्यंग्य, निबंध एवंकविताविधा से परिचितहोंगे। 5- निबंध लेखन एवंअपठितगद्यांष के माध्यम से विद्यार्थियों का बौद्धिक विकासहोसकेगा।	
Credit Value	**2 Credits**	**Credit = 15 Hours – Learning &Observation**
Total Marks	**Max. Marks:=50**	**Min PassingMarks:20**

PART-B: Content of the Course

TotalNo.ofTeaching-learningPeriods (1 hours perperiod)-30Periods(30 Hours)

Unit	Topics(Course Contents)	No. of Period
I	**रचनाएं** भारतवंदना–सूर्यकांत त्रिपाठी 'निराला' (कविता) भोलाराम का जीव–हरिषंकरपरसाई (व्यंग्य) चोरीऔरप्रायष्चित–महात्मागांधी(निबंध)	8
II	**हिन्दीव्याकरण एवंषब्दरचना** उपसर्ग,प्रत्यय, संधि, समास पर्यायवाचीषब्द, विलोमषब्द, अनेकार्थीषब्द, समश्रुतषब्द, अनेकषब्दों के लिए एक षब्द	7
III	**हिन्दीव्याकरण एवंरचनापक्ष** मुहावरेएवंलोकोक्तियां पारिभाषिकषब्दावली एवंहिन्दीमेंपदनाम, षब्दषुद्धि, वाक्यषुद्धि	8
IV	**रचनात्मकलेखन** निबंध लेखन अपठितगद्यांष (नोट–विद्यार्थी कोकिसी एकविषय परनिबंध व प्रदत्तगद्यांष का षीर्षकतथासारांषलिखना होगा।)	7
Keywords		

Signature of Convener & Members (CBoS)

PART-C: Learning Resources

Text Books, Reference Books and Others

1- भारतीयता के अमर स्वर –डॉ. धनंजय वर्मा, मध्यप्रदेषहिन्दीअकादमी
2- आधुनिकहिन्दीव्याकरणऔररचना–डॉवासुदेवनंदन
3- हिन्दीभाषाऔरव्यवहार–डॉ. गंगाचरण त्रिपाठी
4- हिन्दीव्याकरणमाला–डॉ. के. आर. गहिया, डॉ.विमलेषर्मा
5- हिन्दीव्याकरण–कामताप्रसादगुरू

Online Resources-

- http://libgmm.com
- www.bookspace.in
- http://www.gkexams.com

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks: 50 marks
Continuous Internal Assessment (CIA): 15 Marks.
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 15 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A: Q1. Objective-05 marks: Q2. Short answer type-5x2=10 marks Section B: Descriptive answer type question, 1 out of 2 from each unit-4x5=20 marks Total = 35 marks**	

Name and Signature of Convener & Members of CBoS.

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF GEOGRAPHY
COURSE CURRICULUM

PART-A: Introduction			
PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	**Semester-II**	**Session: 2025-2029**	
Course Code	**DUBCAI-204**		
Course Title	**Fundamental of Human Geography**		
Course Type	**GE (General Elective)**		
Prerequisite	**As per Programme**		
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Gain knowledge about major themes of human Geography. • Acquire knowledge on the history and evolution of humans. • Understand the approaches and processes of Human Geography as well as the diverse patterns of habitat and adaptations. • Ability to develop an idea about space and society • Understand the evolution of varied types of economic activities. • Assess the varied aspects of development and regional disparity, in order to formulate measures of balanced development and sustainable development.		
Credit Value	**3 Credits**	**Credit-15 Hours - Learning & Observation**	
Total Marks	**Max. Marks:100**	**Min marks -40**	

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-45 Periods (45 Hours) No. of Topics (Course contents)

Unit	Topics(Course Content)	No. of Period
I	**Introduction to Human Geography,** Definition, nature and scope. Fundamental concept in Human Geography Understanding of man-nature relationship:- Determinism, Possibilism and Neo-determinism. Classification of Human Occupation	**12**
II	**Population and settelment** Growth of population, distribution and density of the world. Socio-economic Pattern of Population-Literacy, Migration:- Causes, and types Occupational Structure.	**10**

	Theory and Model of population growth:-Concept of Optimum Population, Over Population and Under population.	
III	**Human Settlement and Races**-Types and characteristics of human settlement-Rural settlement and Urban Settlement. Human Races- Basis of Racial Classification, world distribution. Habitat and economy of selected communities (Gond, Eskimo, Bushmen).	**12**
IV	**Geography and Development**- Indicators and measures of Regional development, Global pattern of development: - inter-regional variations, HDI. Concept of Sustainable Development.	**11**

Name and Signature of Convener & Members of CBoS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- James, M. Robenstein, An Introduction to Human Geography, Prentice Hall, New Jersey, 2001
- Michael, Can, New Patterns: Process and Change in Human Geography Nelson, 1997
- Hussain Mazid- Human Geography, (Hindi & English Both) Rawat Publication Jaipur
- Garg H.S. Manav Bhoogol, SBPD Publication, Agra.
- Haroon Mohammad, Manav Bhoogol, Wisdom Publication
- Kausik S.D. Manav avam Arthik Bhoogol, Rastogi publication Meerut.
- Maurya, S.D. Manav Bhoogol, Sharda Pustak Bhavan, Prayagraj.2009
- Khullar, D. R. Human Geography. (In Hindi) Kalyani Publishers, Ludhiyana, 2016
- Prasad, Gayatri, Cultural Geography, (In Hindi) Sharda Pustak Bhavan. Prayagraj.

Reference Books

- Bergwan, Edward E., Human Geography: Culture. Connections and Landscape, Prentice Hall, New Jersey. 1995
- Carr, M., Patterns, Process and change in Human Geography, MacMillan Education, London, 1987.
- Daniels Peter, Bradshaw Michael, Shaw Devil and Side way James, Human Geography: Issues for the Twenty First Century, Prentice Hall, New Jersey, 2001
- Clarke, JI, Population Geography of Developing Country, Pergamon press, Oxford, 1971

PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 marks
Continuous Internal Assessment (CIA): 30 Marks.
End Semester Exam (ESE): 70 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:20 & 20 Assignment /seminar-10 Total marks:-30**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 30 marks.**
End Semester Exam (ESE):	**Two section- A&B Section A:Q1. Objective-10 marks: Q2. Short answer type-5x4=20 marks Section B: Descriptive answer type qts, 1 out of 2 from each unit-4x10=40 marks**	

Name and Signature of Convener & Members of CBoS.

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FOUR YEAR UNDERGRADUATE PROGRAMME (2025-29)
DEPARTMENT OF GEOGRAPHY
COURSE CURRICULUM

PART-A:Introduction

PROGRAMME: Bachelor in Computer Application Artificial Intelligence (Certificate/Diploma/Degree/Honors)	**Semester-II**	**Session: 2025-2029**

Course Code	**DUBCAI-204P**	
Course Title	**Scale and Representation of Relief**	
Course Type	**Practical**	
Prerequisite	**As per Programme**	
Course Learning Outcomes (CLO)	**At the end of this course, the students will be able** • Understand and prepare different kinds of Scales and comprehend the concept of scales. • Identify the features of the land form through counters • Developed the Relief Map Making skills. • Gain in-depth knowledge on Drawing of Contour Features.	
Credit Value	**1 Credits**	**Credit-30 Hours – Lab practical's & training**
Total Marks	**Max. Marks:50**	**Min marks -20**

PART -B: Content of the Course

Total No. of Teaching-Learning Periods (01 Hr. per period)-45 Periods (45 Hours) No. of Topics (Course contents)

Module	Topics(Course Content)	No. of Period
List of Practical Experiments	• Scale- Methods of representing Scale, Conversion of Scale Type of Linear Scale-Simple Scale, Time Scale, Comparative Scale, Diagonal Scale • Representing of Relief- Pictorial, Mathematical and Combine Methods. • Contours-Land forms Representing By Contours-Hill, Ridge, Plateau, V shaped Valley, U shaped Valley, Waterfall Note: Concerned teacher can add additional experiment as per requirement	**30**

Name and Signature of Convener & Members of CBoS

PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books, Reference Books and Others

- Sarkar, A.K. (1997): Practical Geography: A Systematic Approach. Orient Publication Kolkata.
- Sharma, J.P. (2001): Prayogik Bhugol., Rastogi Publication, Meerut
- Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions),

Kalyani Publishers, New Delhi.
- Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan,
- Haroon, M., Practical Geography, Mishra Trading Corporation, Varanasi, 2010
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Suggested Continuous Evaluation Methods:

Maximum Marks: 50 marks
Continuous Internal Assessment (CIA): 15 Marks.
End Semester Exam (ESE): 35 marks

Continuous Internal Assessment (CIA): (By Course Teacher)	**Internal test/Quiz-:10 & 10 Assignment /seminar-05 Total marks:-15**	**Better marks out of the two test/Quiz+ obtained marks in assignment shall be considered against 15 marks.**
End Semester Exam (ESE):	**Laboratory/field skill performance: on spot Assessment** **A. Performed the task based on lab work- 20 marks** **B. Spotting based on tools & technology(written)-10marks** **C. Viva-voce(based on principle/technology)- 5 marks**	

Name and Signature of Convener & Members of CBoS.