

PROGRAMME SPECIFIC OUTCOMES

On successful completion of B.Voc. Programme (Artificial Intelligence and Data Science) students will be able to:

PSO 1: Get knowledge about various practical and professional tools required for data entry.

PSO 2: Get knowledge about document writing and technical writing concepts

PSO 3: Professional development in the field of AI and Data Science

PSO 4: Get knowledge about basic and advanced data science tools (e.g, Python, R and Weka) while working collaboratively on real-world problems.

PSO 5: Get knowledge about methods to collect, organize, manage, examine, prepare, analyze, cleaning, transformation, modeling and visualize data on student-driven data analysis projects.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I
COURSE CODE: BVIL-1421
Punjabi (Compulsory)

COURSE OUTCOMES:

CO1:nksw nBksw' g[[[;se d/ eftsk Gkr Bz{ gVQkT[D dk wB'oE
ftfdnkoEhnK nzdo eftsk gqsh fdbu;gh, ;{M Bz{ g?dk eoBk j?
sK fe T[j nkX[fBe d"o ftu uZbojhnK ekft XkokoK ns/ ethnK
pko/ frnkB jkf;b eo ;eD.fJ; dk j'o wB'oE eftsk dh ftnkfynk,
ftPb/PD s/ w[bzeD dh gqfefonk s'AikD{ eokT[Dk th j? sKfe
T[j ;wekbh ;wkidhnK ;wZf;nktK Bz{ ;wM ;eD ns/ nkb'uBkswe
fdqPNh pDk ;eD.

CO2:frnkB wkbk (ftfrnkBe s/ ;wki ftfrnkBe b/yK dk ;zrqfj)
g[[[;se B{z f;b/p; ftu PkfwB eo e/ ftfdnkoEhnK nzdo gVQD
dh o[uh Bz{ g?dk eoBk j? ns/ w[ZbtkB frnkB d/Dk j?.

CO3:g?oQk ouBk ns/ g?oQkgVQ e/ gqPBK d/ T[so d/D dk wB'oE
ftfdnkoEhnK dh p[ZXh B{z shyD eofdnK T[BK dh fbyD gqfsGk
B{z T[iKro eoBk j?.

CO4:X[Bh ftT[As gVQD Bkb ftfdnkoEh X[BhnK dh T[ukoB gqDkbh
s'Atke| j'Dr/.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester I
COURSE CODE: BVIL-1031
BASIC PUNJABI (In lieu of Compulsory Punjabi)

COURSE OUTCOMES:

CO1: w[ZYbh gzikph gVQkT[D dk wB'oE ftfdnkoEhnK B{z gzikph GkPk B{z f;ykT[D dh gqfefonk ftu gk e/ fJe j'o GkPk f;ZyD dK w"ek gqdkB eoBk j?.

CO2: fJ; ftu ftfdnkoEh B{z pkoheh Bkb GkPk dk nfXn?B eotkfJnk ikt/rk.

CO3: ftfdnkoEhnK B{z gzikph Ppd ouBk s' AikD{ eotkfJnk ikt/rk.

CO4: w[ZYbh gzikph gVQkT[D dk wB'oE ftfdnkoEhnK B{z fBZs tos'A dh gzikph Ppdktbh pko/ dZ;Dk j?.

CO5: w[ZYbh gzikph gVQkT[D dk wB'oE ftfdnkoEhnK dk Ppd x/ok ftPkb eoBk j?.

CO6: ftfdnkoEhnK B{z gzikph ftu j|s/ d/ ;Zs fdBK d/ BK, pkoQK wjhfbnK d/ BK, oZ[sK d/ BK, fJes'A ;" sZe frDsh PpdK ftu f;ykT[Dk j?.

B.Voc. (Artificial Intelligence and Data Science) Semester I
Course Code: BVIL-1431

**Punjab History and
Culture (1450-1716) (Special
paper in lieu of Punjabi
Compulsory)**

COURSE OUTCOMES:

After the completion of Sem-I (Under Credit Based Continuous Evaluation Grading System) student will have a grasp on:

CO1: To enable them to have grasp on the physical features of Punjab, its flora & fauna, the composition of population, culture, society, religion and polity.

CO2: To make a comparison between the original philosophical & teachings of Sikh Gurus and their relevance in the present scenario.

CO3: To enable students of history to have deep insight into the origin of Sikhism, foundation of Khalsa, the conflict with Mughals and the rise of Banda Bahadur and the aftermath.

CO4: The paper has been designed specifically to have in dept peep into the past in order to have better understanding of present & apply corrective measures

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1102

Communication Skills in English – I

COURSE OUTCOMES

At the end of this course, the students will develop the following Skills:

CO 1: Reading skills that will facilitate them to become an efficient reader

CO 2: The ability to realize not only language productivity but also the pleasure of being able to articulate well

CO 3: The power to analyze, interpret and infer the ideas in the text

CO 4: The ability to have a comprehensive understanding of the ideas in the text and enhance their critical thinking

CO 5: Writing skills of students which will make them proficient enough to express ideas in clear and grammatically correct English

CO 6: Ability to plan, organise and present ideas coherently on a given topic

CO 7: The skill to use an appropriate style and format in writing letters (formal and informal)

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1113

Introduction to Computers and Information Technology

COURSE OUTCOMES:

After Completing this course, the students will be able to:

CO1: Comprehend fundamentals of Computer and Software

CO2: Describe Information Technology and its Applications

CO3: Comprehend the concepts of I/O devices and memory.

CO4: Demonstrate the Introduction to Emerging Technologies: Big Data, IoT and Cloud

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1114

Introduction to Artificial Intelligence and Data Science

COURSE OUTCOMES:

After completing this course the student will be able to:

CO1: Comprehend the concepts of Artificial Intelligence.

CO2: Demonstrate various concepts of Data Science domain and its difference with business intelligence.

CO3: Comprehend Data Science methodologies and steps involved in data analysis.

CO4: Apply learned techniques to solve problem associated with basic statistical operations on Real/Dummy data

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1115

Office Fundamentals

COURSE OUTCOMES:

After completing this course, the students will be able to:

CO1: Comprehend basics and formatting concepts of word document.

CO2: Have knowledge of creating, customize Tables and working with Graphics in word.

CO3: Comprehend basics of presentation involved in text formatting, graphs and animation.

CO4: Comprehend basics of spreadsheet involved in creation, editing of graphs, sorting, querying and filtering of data.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- I

Course Code: BVIP-1117

Field Visit and Report

COURSE OUTCOMES:

After completing this course, the students will be able to:

CO1: Understand and familiarize themselves with the work environment of companies.

CO2: Learn coordination and cooperation of various teams for the project

CO3: Develop skills necessary for structuring, managing, and carrying out projects within an organization/industry.

CO4: Describe the observations through report writing.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- I

Course Code: BVIP-1118

Minor Project – I

The primary objective of the course is to encourage students to learn various tools and to build AI/ Data Science based Model: This module is delivered using a combination of introductory lectures and participation activities by the students.

COURSE OUTCOMES:

After completing this course, the students will be able to:

CO1: Apply the tools and techniques learnt in the course to process and analyze data for problems associated with AI and Data science.

CO2: Apply their knowledge to work on assigned/self-identified project.

CO3: Work within defined time and resource constraints while working with real world applications.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- I

COURSE CODE: AECD-1161

DRUG ABUSE: PROBLEM, MANAGEMENT & PREVENTION

COURSE OUTCOMES:

CO1. This information can include factual data about what substance abuse is; warning signs of addiction; information about how alcohol and specific drugs affect the mind and body;

CO2. Learn to be supportive during the detoxification and rehabilitation process.

CO3. Main focus of substance abuse education is teaching individuals about drug and alcohol abuse and how to avoid, stop, or get help for substance use disorders.

CO4. Substance abuse education is important for students alike; there are many misconceptions about commonly used legal and illegal substances, such as alcohol and marijuana.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester II

COURSE CODE: BVIL-2421

PUNJABI (COMPULSORY)

COURSE OUTCOMES:

CO1: nksw nBksw g[[[;se d/ ejkDhGkr B{z f;b/p; ftu PkfwB eo e/ ftfdnkoEhnK nzdo ejkDh Bz{ gVQD dh o[uh Bz{ g?dk eoBk j? ns/ ejkDh irs Bkb i'VDk j?.

CO2: frnkB wkbk g[[[;se B{z f;b/p; ftu PkfwB eo e/ ftfdnkoEhnK nzdo gVQD dh o[uh Bz{ g?dkeoBk j? .

CO3: ;zy/g ouBk dk wB'oE ftfdnkoEhnK B{z ;w/A ns/ fwjBs dh pZus eoB pko/ dZ;Dk j?.

CO4: g?oQk gVQ e/ gqPBK d/ T[Zso d/D dk wB'oE ftfdnkoEhnK dh p[ZXh B{z shyD eofdnK T[BQK dh fbyD gqfsGk B{z T[iKro eoBk j?.

CO5: Ppd pDso ns/ Ppd ouBk gVQD Bkb ftfdnkoEh fJ;d/ w[ZYb/ ;zebgK B{z nkXko pDk e/ fJjBK ;zebgK s'A ikD{ j'Dr/ .

CO6: Ppd Pq/DhnK Bz{ gVQkT[D dk wB'oE ftfdnkoEhnK nzdo gzikph GkPk dh nwhoh dk ns/ pkohehnK Bz{ ;wMD bJh tZyo/ -tZyo/ f;XKsK dk ftek; eoBk j?.

CO7: w[jktfonK dh tos'ABkb rZbpks ftu gogZesk nkT[Adh j?.fJj ftfdnkoEhnK dh rZbpks ftu fByko fbnkT[D dk ezW eoBr/.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II
Course Code: BVIL-2031

BASIC PUNJABI

COURSE OUTCOMES:

CO1:nksw nBksw g[[[;se d/ ejkDh Gkr B{z f;b/p; ftu Pkfwbeo e/
ftfdnkoEhnK nzdo ejkDh Bz{ gVQD dh o[uh Bz{ g?dk eoBk j? ns/
ejkDh irs Bkb i'VDk j?.

CO2:frnkB wkbk g[[[;se B{z f;b/p; ftu Pkfwb eo e/ ftfdnkoEhnK
nzdo gVQD dh o[uh Bz{ g?dk eoBk j? .

CO3;;zy/g ouBk dk wB'oE ftfdnkoEhnK B{z ;w/A ns/ fwjBs dh pZus
eoB pko/ dZ;Dk j?.

CO4:g?oQk gVQ e/ gqPBK d/ T[Zso d/D dk wB'oE ftfdnkoEhnK dh p[ZXh
B{z shyD eofdnK T[BQK dh fbyD gqfsGk B{z T[ikr oeoBk j?.

CO5:Ppd pDso ns/ Ppd ouBk gVQD Bkb ftfdnkoEh fJ;d/ w[ZYb/ ;zebgK
B{z nkXko pDk e/ fJjBK ;zebgK s'AikD{ j'Dr/ .

CO6:Ppd Pq/DhnK Bz{ gVQkT[D dk wB'oE ftfdnkoEhnK nzdo gzikph GkPk
dh nwhoh dk ns/ pkohehnK Bz{ ;wMD bJh tZyo/ -tZyo/ f;XKsK dk
ftek; eoBk j?.

CO7:w[jktfonK dh tos' ABkb rZbpks ftu gogZesk nkT[Adh j?.fJj
ftfdnkoEhnK dh rZbpks ftu fByko fbnkT[D dk ezW eoBr/.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II

COURSE CODE: BVIL-2431

Punjab History and Culture (C. 320 to 1000 B.C.)

(Special paper in lieu of Punjabi Compulsory)

COURSE OUTCOMES:

After completing Semester II and course on Ancient History of Punjab, students of History will be able to identify and have a complete grasp on the sources & writings of Ancient History of Punjab

CO 1: Analyse the emergence of Mauryan, Gupta empires during the classical age in India

CO 2: To understand the various factors leading to rise and fall of empires and emergence of new dynasties and their Culture, society, administration, polity and religion specifically of Kushans and Vardhanas in the Punjab

CO 3: Students will be adept in constructing original historical argument based on primary source material research

CO 4: To have an insight on the existing Literature of this period and understand the past developments in the light of present scenario.

CO 5: To enable students to have thorough insight into the various forms/styles of Architecture and synthesis of Indo - Muslim Art and Architecture in Punjab

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II

Course Code: BVIM-2102

COMMUNICATION SKILLS IN ENGLISH – II

COURSE OUTCOMES:

After passing this course the student will develop the following Skills:

CO1: Enhancement of listening skills with the help of listening exercises based on conversation, news and TV reports.

CO2: Improvement of speaking skills enabling them to converse in a specific situation.

CO3: Acquisition of knowledge of phonetics which will help them in learning about correct pronunciation as well as effective speaking.

CO4: The capability to present themselves well in a job interview.

CO5: The ability of Note-Taking to be able to distinguish the main points from the supporting details and the irrelevant information from the relevant one.

CO6: Speaking skills of the students enabling them to take active part in group discussion and present their own ideas.

CO7: The capability of narrating events and incidents in a logical sequence.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester II

Course Code: BVIL-2113

Computational Problem Solving

COURSE OUTCOMES:

After completing this course, the students will be able to:

CO1: Comprehend the concepts of computation problem, data and expressions

CO2: Demonstrate the usage of algorithms under several categories like list, string, dictionary and control structures

CO3: Implement various problems associated with functions and file handling using related languages

CO4: Comprehend the concepts of Object Oriented Programming and Database using related programming language

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II

Course Code: BVIL-2114

Mathematical Foundation

COURSE OUTCOMES:

After passing this course the student will be able to reflect on

CO1: Set and operations on sets

CO2: Relation, Representation of Relation, Types of Relation and their Properties

CO3: To encode information in form of logical sentences through propositional and predicate logic

CO4: Concept of Duality law, Algebra of propositions, Propositional Functions, Predicates, Quantifiers, Negation of Quantified Statements

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II
Course Code: BVIL-2115

Technical Writing

COURSE OUTCOMES:

After completing this course the students will be able to:

CO1: Write effective reports, proposals and papers.

CO2: Correspond effectively through different modes of written communication.

CO3: Present himself/ herself professionally through effective resumes and interviews.

CO4: Understand different technical writing style and concept of editing.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II

COURSE CODE: BVIL-2116

Data Collection and Analysis

COURSE OUTCOMES:

After completing this course, the students will be able to:

CO1: Comprehend the term Data Collection and Analytics and Data Collection methods

CO2: Describe the application of basic Data Analysis Tools.

CO3: Understand the process of Data Analysis along with its applications.

CO4: Comprehend Data Analysis using spreadsheet software and Data Analysis tools.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II

Course Code: BVIL-2117

Database Management System

Course Outcomes:

After passing course the student will be able to:

CO1: Understand the various terms like database, database models and ER diagrams.

CO2: Comprehend Relational Algebra and Relational Calculus

CO3: Explain the concept of database normalization and its various forms

CO4: Demonstrate the use of SQL to create basic to intermediate level of databases

CO5: Comprehend the concept of Cursors and Triggers

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II

Course Code: BVID-2119

Minor Project-II

Course Outcomes:

After completing this course, the students will be able to:

CO1: Apply the tools and techniques learnt in the course to process and analyze data for problems associated with AI and Data science.

CO2: Apply their knowledge to work on assigned/self-identified project.

CO3: Demonstrate an ability to work in teams and manage the conduct of the research study.

CO4: Describe the observations through project report submission.

Bachelor of Vocation (Artificial Intelligence and Data Science) Semester- II

Course Code: AECD-2161

DRUG ABUSE

COURSE OUTCOMES:

CO1: This information can include factual data about what substance abuse is; warning signs of addiction; information about how alcohol and specific drugs affect the mind and body

CO2. Learn to be supportive during the detoxification and rehabilitation process.

CO3: Main focus of substance abuse education is teaching individuals about drug and alcohol abuse and how to avoid, stop, or get help for substance use disorders.

CO4: Substance abuse education is important for students alike; there are many misconceptions about commonly used legal and illegal substances, such as alcohol and marijuana.

