



त्रिभुवन विश्वविद्यालय

व्यवस्थापन संकाय
डीनको कार्यालय

डीनको कार्यालय
कीर्तिपुर, काठमाडौं, नेपाल।

टेलिफोन : ०१-४३३०८१८, ०१-४३३२७१८, ०१-५१९५५६८ (Exam)

फ्याक्स : ९७७-०१-५१९५४२९

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मिति २०७८/१०/१२

सूचना

त्रि.वि.व्यवस्थापन संकाय, डीनको कार्यालयबाट संचालित Bachelor of Business Administration (BBA), Bachelor of Business Management (BBM) र Bachelor of Information Management (BIM) कार्यक्रमहरूको देहाय बमोजिमको संशोधित पाठ्य संरचना तथा पाठ्यक्रम यहि शैक्षिक वर्ष २०७७/०७८ (सन् २०२१) मा भर्ना भै अध्ययन गर्ने तथा त्यसपछिका विद्यार्थीहरूको लागि लागु हुने गरी त्रि.वि. प्राज्ञिक परिषद्द्वारा स्वीकृत भएको व्यहोरा जानकारी गराईन्छ र सोही अनुसार नै पठनपाठन गर्नुहुन समेत अनुरोध छ।

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प्रा.डा. डिल्लीसज शर्मा
डीन

**Tribhuvan University
Faculty of Management
Office of the Dean**



**BACHELOR OF BUSINESS INFORMATION MANAGEMENT (BIM)
Curriculum**

Effective from the Academic Batch 2021 AD

**Office of the Dean
Faculty of Management
Tribhuvan University
Kathamandu**

TRIBHUVAN UNIVERSITY

Faculty of Management

INTRODUCTION TO FACULTY OF MANAGEMENT

The Faculty of Management (FOM), Tribhuvan University has its ultimate objective of educating students for professional pursuits in business, industry and government. It is further dedicated to contributing to an increase in the knowledge and understanding of business and public administration. FOM aims at developing a networking with management institutes in the country and abroad to exchange new knowledge, technology, and methods of achieving higher level efficiency in management of business and public entities. It also attempts to continuously innovate and promote cost-effective, socially relevant, modern technology based educational programs in Nepal.

The FOM offers instructions leading to Bachelor of Business Studies (BBS), Bachelor of Travel and Tourism Management (BTTM), Bachelor of Hotel Management (BHM), Bachelor of Information Management (BIM), Bachelor of Business Administration (BBA), Bachelor of Public Administration (BPA), Bachelor of Mountaineering Studies (BMS), Bachelor of Business Administration - Finance (BBA-F), Post Graduate Diploma in Police Sciences (PGDPS), Master of Business Management (MBM), Master of Business Studies (MBS), Master of Public Administration (MPA), Master of Travel and Tourism Management (MTTM), Master of Hospitality Management (MHM), Master of Finance and Control (MFC), Master of Business Administration (MBA) and Master of Business Administration in Global Leadership and Management (MBA in GLM), Master of Business Administration in Information Technology (MBA IT), Master of Business Administration - Finance (MBA-F), Master of Business Administration in Corporate Leadership (MBA-CL), Master of Business Administration in Marketing (MBA - M), Master of Adventure Tourism Studies (MATS), The FOM also offers Master of Philosophy (M. Phil.) in Management, Master of Philosophy (M. Phil.) in Public Administration leading to a Degree of Doctor of Philosophy (Ph. D.).

FOM's GOALS

- Prepare professional managers capable of handling business in a dynamic global environment.
- Produce socially responsible and creative entrepreneurs capable of promoting business and industry for the socio-economic development of Nepal.
- Conduct research and management development programs for updating the knowledge and skills in academia and corporate world.
- Innovate and promote management programs catering to the needs of various social and economic sectors of Nepal.
- Establish linkages with leading universities and management institutes abroad and collaborate with them in development programs and their implementation in the work place.

BACHELOR OF INFORMATION MANAGEMENT (BIM) PROGRAM

The Bachelor of Information Management (BIM) is a four year eight semester program of the Faculty of Management, Tribhuvan University offering integrated Information Technology and Management courses. This course is envisioned to enable students to develop skills in information technology, and then apply the theories and concepts of a broad, integrated curriculum covering computing, informatics, business fundamentals, and critical and analytical decision-making.

MISSION

The mission of FOM's Bachelor of Information Management (BIM) program is to develop socially responsive, creative, and result oriented information technology (IT) professionals. The BIM program is designed to equip graduates with the skills and attributes required to be effective and efficient information technology professionals.

OBJECTIVES OF THE PROGRAM

Prepare IT professionals proficient in the use of computers and computational techniques in order to develop effective information systems to solve real life problems in the organizational milieu.
Develop students' skill in object-oriented software design methods and data management systems.
Provide professional training to students by combining information technology with managerial skills.
Prepare students to proceed on to postgraduate level study in information management within and outside the country.

ELIGIBILITY CONDITION FOR ADMISSION

Students applying for admission to the BIM program must have

- Successfully completed twelve-year schooling or its equivalent from any university, board or institution recognized by Tribhuvan University.
- Minimum D+ grade in each subject of grade 11 and 12 with CGPA 1.80 or more / Secured at least second division in the 10+2, PCL or equivalent program; and
- Complied with all the application procedure.

ADMISSION CRITERIA

Written Test:

Eligible applicants are required to appear in the entrance test commonly known as Central Management Admission Test (CMAT) conducted by the Faculty of Management. The test will follow the international testing pattern and standards. It includes the areas like:

Verbal ability

Quantitative ability

Logical reasoning

General awareness

There shall be altogether one hundred (100) objective questions in the CMAT containing twenty (25) questions in each section with a total weight of 100 marks. Student must secure a minimum of 40% in the CMAT in order to qualify for the interview.

Interview

Applicants securing above cut off point marks in the CMAT will be short-listed. Only short listed candidates will be interviewed and selected for admission.

Teaching Pedagogy

The general teaching pedagogy includes class lectures, group discussions, case studies, guest lectures, role play, research work, project work (individual and group), assignments (theoretical and practical), and term papers. The teaching faculty will determine the choice of teaching pedagogy as per the need of the course.

The concerned faculty shall develop a detailed course outline and work plan at the beginning of each semester and also recommends the basic text and other reference materials for effective teaching-learning of the course modules.

Internship

In the final semester, students shall be attached to organizations where they have to work for a period of eight weeks. Each student shall prepare an individual project report in the prescribed format based on his / her work in the respective organization assigned to him / her. Evaluation of the internship shall be based on the confidential report by the organization, project report and presentation of the report. The report must be submitted by the end of the eighth semester. Students must secure a minimum grade of "C" in the internship. The internship carries a weight equivalent to 3 credit hours.

Examination, Evaluation and Grading System

The BIM program will be executed through the semester system. The regular program shall be completed in eight semesters. The internal (ongoing) evaluation and the external (end of semester) examination shall carry 40 percent and 60 percent weightage respectively. The semester examinations shall be conducted by FOM. The final grade of the student shall be determined on the overall performance in the internal and external examinations.

Passing Grade and Grading System

The final evaluation of students is done through the examination conducted by Tribhuvan University. Students must secure a minimum of grade 'B' or Grade Point Average (GPA) of 3.0 in the internal evaluation in order to qualify to appear in the semester examination. In order to pass the semester examination the student must secure a minimum of grade 'B' or the Cumulative Grade Point Average (CGPA) of 3.00. The grading system shall be as follows:

Letter Grade	Cumulative Grade Point Average (CGPA)	Marks Obtained in Percent	Divisions / Remarks
A	4.00	90 - 100	Distinction
A-	3.70 - 3.99	80 - 89.9	Very Good
B+	3.30 - 3.69	70 - 79.9	First Division
B	3.00 - 3.29	60 - 69.9	Second Division
B-	2.70 - 2.99	50 - 59.9	Pass in Individual Subject
F	Below 2.70	Below 50	Fail

Make up/Retake Exam

Make up/Retake examination shall be conducted as per the semester guidelines.

ATTENDANCE

Students are required to attend regularly all theory and practical classes, assignments, study tour, field trip, seminars and presentations as required by the course. A student is required to attend at least 80 percent of such activities in order to qualify for the semester examination.

CREDIT TRANSFERS AND WITHDRAWAL

The program allows students to transfer the credits earned by them in similar program of other universities recognized by Tribhuvan University. A student who has partially completed the BIM program and would like to discontinue his / her studies shall also be allowed to withdraw from the program. In such cases, a certificate specifying the credit earned by the student in the program shall be provided.

GRADUATION REQUIREMENTS

The BIM program extends over eight semesters (four academic years). The BIM degree is awarded upon its successful completion of all the following requirements specified by the curriculum.

The successful completion of 126 credit hours as prescribed with a minimum of passing grade in all courses with an aggregate CGPA of 3.00.

A minimum of grade 'B' obtained in the Industrial Attachment Project.

Completion of courses for the fulfillment of the requirements of the BIM program must occur within seven years from the time of registration.

CURRICULAR STRUCTURE

The BIM program requires the students to study a total of 126 credit hours. The curricular structure of the program comprises of the following four separate course components.

I.	Management Courses	30 Cr
II.	Analytical and Support Courses	21 Cr
III.	Information Technology and Computing Courses	63Cr
IV.	Elective Courses	06 Cr
V.	Project	03 Cr
VI.	Internship	03 Cr
	Total	126 Cr

Code	Subject	Credit Hrs
I. Management Courses		30 Cr
MGT 231	Foundation of Business Management	3 Cr
MGT 241	Organizational Behavior and Human Resource Management	3 Cr
ENG 203	Business Communication	3 Cr
Acc 201	Financial Accounting	3 Cr
ACC 202	Cost and Management Accounting	3 Cr
FIN 229	Fundamentals of Corporate Finance	3 Cr
MKT 201	Fundamentals of Marketing	3 Cr
MGT 240	Strategic Management	3 Cr
MGT 236	Business Environment	3 Cr
ECO 206	Microeconomics & Macroeconomics for Business	3 Cr
II. Analytical and Support Courses		21 Cr
ENG 206	English	3 Cr
MTH 204	Basic Mathematics	3 Cr
IT 235	Discrete Structure	3 Cr
STT 211	Business Statistics	3 Cr
SOC 203	Sociology for Business Management	3 Cr
MGT 205	Operations Management	3 Cr
RCH 201	Business Research Methods	3 Cr
III. Information Technology and Computing Courses		63 Cr
IT 231	Foundation of Information Technology	3 Cr
IT 233	Digital Logic	3 Cr
IT 232	C Programming	3 Cr
IT 240	Business Data Communication and Networking	3 Cr
IT 237	Web Technology I	3 Cr
IT 234	Object Oriented Programming with Java	3 Cr
IT 236	Microprocessor and Computer Architecture	3 Cr
IT 238	Data Structure and Algorithm	3 Cr
IT 239	Web Technology II	3 Cr
IT 220	Database Management System	3 Cr
IT 241	Operating System	3 Cr
IT 242	Software Design and Development	3 Cr
IT 243	Programming with Python	3 Cr
IT 244	Information Security	3 Cr
IT 228	Artificial Intelligence	3 Cr
IT 245	Business Information System	3 Cr
IT 246	It Ethics and Cybersecurity	3 Cr
IT 247	E-Commerce and Internet Marketing	3 Cr
IT 248	IT Entrepreneurship and Management	3 Cr
IT 249	Business Intelligence	3 Cr
IT 250	Digital Economy	3 Cr
IV. Elective Courses		06 Cr
IT 271	Networking and System Administration (7th)	3 Cr
IT 272	Mobile Application Development (7th)	3 Cr
IT 273	Multimedia System Application (7th)	3 Cr
IT 274	Data Warehousing and Data Mining (7th)	3 Cr
IT 275	.NET Programming (8th)	3 Cr
IT 276	Database Administration (8th)	3 Cr
IT 277	Cloud Computing (8th)	3 Cr
IT 278	Big Data and Analytics (8th)	3 Cr

	Project and Internship	06 Cr
IT 350	Internship	3 Cr
IT 352	Project	3 Cr

COURSE CYCLE

Code	First Semester	15 Cr
IT 231	Foundation of Information Technology	3 Cr
IT 232	C Programming	3 Cr
ENG 206	English I	3 Cr
MGT 231	Foundation of Business Management	3 Cr
MTH 204	Basic Mathematics	3 Cr
Second Semester		15 Cr
IT 233	Digital Logic	3 Cr
IT 234	Object Oriented Programming with Java	3 Cr
IT 235	Discrete Structure	3 Cr
ENG 203	Business Communications	3 Cr
MGT 241	Organizational Behavior & Human Resource Management	3 Cr
Third Semester		15 Cr
IT 236	Microprocessor and Computer Architecture	3 Cr
IT 237	Web Technology I	3 Cr
IT 238	Data Structure and Algorithms	3 Cr
ACC 201	Financial Accounting	3 Cr
STT 201	Business Statistics	3 Cr
Fourth Semester		18 Cr
IT 239	Web Technology II	3 Cr
IT 220	Database Management System	3 Cr
IT 240	Business Data Communication and Networking	3 Cr
IT 241	Operating System	3 Cr
ECO 206	Economics for Business	3 Cr
ACC 202	Cost and Management Accounting	3 Cr
Fifth Semester		15 Cr
IT 242	Software Design and Development	3 Cr
IT 243	Programming with Python	3 Cr
IT 244	Information Security	3 Cr
IT 228	Artificial Intelligence	3 Cr
MKT 201	Fundamentals of Marketing	3 Cr
Sixth Semester		18 Cr
IT 245	Business Information Systems	3 Cr
IT 246	IT Ethics and Cybersecurity	3 Cr
IT 352	Project	3 Cr
FIN 229	Fundamentals of Corporate Finance	3 Cr
MGT 236	Business Environment	3 Cr
RCH 201	Business Research Methods	3 Cr
Seventh Semester		15 Cr
IT 247	E-Commerce and Internet Marketing	3 Cr
	Elective I	3 Cr
SOC 203	Sociology for Business Management	3 Cr
MGT 205	Operations Management	3 Cr
MGT 240	Strategic Management	3 Cr

Eighth Semester		15 Cr
IT 248	IT Entrepreneurship and Management	3 Cr
IT 249	Business Intelligence	3 Cr
IT 250	Digital Economy	3 Cr
IT 350	Internship	3 Cr
	Elective II	3 Cr

ENG 206: English I

(BIM)

Credits: 3
Lecture Hours: 48

Course Description

English 201 course focuses on English language and communication skills required for general as well as professional contexts. It encourages students to expand their English vocabulary, improve their reading and writing abilities in English in both social and professional interactions, and learn terminology and skills that they can apply to different communicative purposes. It also seeks to enhance students' cross-cultural understanding by presenting a wide array of ideas from different spheres of human activity, which is of vital importance for success as an executive in management. Reading opinions of thoughtful people is important because we learn about other opinions and ideas in the process and they help shape our ideas and prepare us to become educated citizens who can think and form their own conclusions.

The course has two main components of equal weightage: (50% + 50%)

- I. Core English**
- II. Genres and Disciplines**

Course Objectives and Outcomes

After completing this course, students will be able to:

- read texts written in various disciplines and discourses
- express themselves using varied forms in both speech and writing
- adapt content to purpose, context and audience
- understand and use appropriate style and tone
- conduct general and business communications
- work successfully in a team
- match audience with the purpose and medium of communication
- use presentational and rhetorical techniques for effective communication

- gain disciplinary and interdisciplinary insights

Course Contents

I. Core English

Unit 1.

1. What are you like?
2. Customs and traditions
3. Looking ahead
4. Into the wild
5. Health matters
6. Would you believe it?
7. Traces of the past

Unit 2.

8. The big issues
9. It's a crime
10. Buying and selling
11. Entertainment or art
12. A changing world
13. Writing guide
14. Grammar reference

II. Genres and Disciplines

Unit 3

1. New Nepal
2. Shooting an Elephant
3. The Parrot in the Cage
4. Advertise Your Business
5. The Company Man
6. Light My Lucky
7. The Etiquette of Freedom

8. The Rights of Animals
9. Professions for Women
10. The Stronger
11. Here I Love You

Unit 4

12. Girl
13. Popular Mechanics
14. The Fly
15. Jest and Earnest
16. The Hundredth Dove
17. The Lunatic
18. The Clock Tower
19. Beauty
20. All-Pervading Poetry
21. The Allegory of the Cave
22. Not the Non-Existent

Teaching Method

The suggested teaching method is to introduce the theme and the writing task and then guide the students to practice specific skills and put language knowledge to produce their own writings. It is important to discuss what it means to be educated and how great thinkers lead the way for students to become educated through different ideas and opinions. The study of thoughtful writings on different disciplines by experts in their fields should spark discussion and action around topics of societal importance. The method, therefore, is to engage students in a dialogue about the questions and ideas raised in each text by exploring different perspectives, listening to the voices of others, and respectfully sharing their own experiences and thoughts.

Evaluation

The examinations will cover the language skills and include a range of tasks which assess students' ability to use English in a variety of contexts. Above all, the examinations will assess

the students' ability to communicate effectively in English, especially in reading and writing activities using appropriate writing style. Special credit will be given to originality of expression and depth of thinking,

Prescribed Texts

Gude, Kathy, & Mary Stephens. **Cambridge English Advanced Result: Student's Book with *Online Practice***. Oxford UP, 2018.

Lohani, S., compiler & editor. ***Visions: A Thematic Anthology***. Kathmandu: Vidyarthi Pustak Bhandar, 2020.

References

Carter, Ronald, and Michael McCarthy. ***Cambridge Grammar of English***. Cambridge UP, 2006.

Larsen-Freeman, Diane, and Marti Anderson. ***Techniques and Principles in Language Teaching***. 3rd ed., Oxford UP, 2011.

Klarer, Mario. ***An Introduction to Literary Studies***. 3rd ed., Routledge, 2013.

Abrams, M.H., and G.G. Harpham. ***A Glossary of Literary Terms***. 11th ed., Cengage Learning, 2014.

Minot, Stephen, and Diane Thiel. ***Three Genres: The Writing of Literary Prose, Poems and Plays***. 9th ed., Pearson, 2014.

Harmer, Jeremy. ***The Practice of English Language Teaching***. 5th ed., Pearson, 2015.

Pearson Education. ***Longman Business English Dictionary***. 2nd ed., Longman, 2018.

Oxford Advanced Learner's Dictionary of Current English. 10th ed., Oxford UP, 2020.

IT 231: Foundation of Information Technology (BIM)

Nature of the course: Theory + Practical

Credits: 3
Lecture Hours:48

Course Objectives:

The main objective of this course is to provide students both theoretical and practical knowledge of fundamental concepts of computers and information technology.

Course Description:

This course covers basic concepts of computers and information technology including introduction, hardware, software, memory, input/output, database, networks and data communication, Internet, multimedia, computer security, and contemporary technologies.

Course Details

Unit 1: Introduction to Computers

3 LHs

Introduction; Digital and Analog Computers; Characteristics of Computer; History of Computer; Generations of Computer; Classification of Computer; Data and Program representation in Computer; Applications of Computers

Unit 2: Information Technology and Business

3 LHs

Business in the information age; Information systems; Organization structure and IT support; Evolution and types of information systems; IT for business; IT for individuals; Computers in past and present

Unit 3: Computer System Hardware

10 LHs

Introduction; Central Processing Unit; Memory Unit; Interconnecting the Units of a Computer; Inside a Computer Cabinet; Computer Memory: Introduction; Memory Representation; Memory Hierarchy; CPU Registers; Cache Memory; Primary Memory; Secondary Memory; Access Types of Storage Devices; Magnetic Tape; Magnetic Disk; Optical Disk; Magneto-Optical Disk; How the Computer uses its memory; Input and Output Devices: Introduction; Input-Output Unit; Input Devices; Human Data Entry Devices; Output Devices; I/O Port; Working of I/O System

Unit 4: Computer Software

6 LHs

Introduction; Types of Software; System Software; Application Software; Software Acquisition; Programming Languages; Operating System: Introduction, Objectives of Operating System, Types of OS, Functions of OS: Process Management, Memory Management, File Management, Device Management, Protection and Security, User Interface, Examples of Operating Systems; New Trends in Software

Unit 5: Data Communication and Computer Network

5 LHs

Introduction; Importance of Networking; Data Communication Media; Data Transmission across Media; Data Transmission and Data Networking; Computer Network; Network Types; Network Topology; Communication Protocols; Networking Hardware; Wireless Networking

Unit 6: Internet and Internet Services**5 LHs**

Introduction; History of Internet; The Internet Architecture; Managing the Internet; Connecting to Internet; Internet Connections; IP Address and Domain Name System (DNS); Client-Server Architecture; Hyper Text Transfer Protocol (HTTP); Electronic Mail (Email); File Transfer Protocol (FTP); World Wide Web; Remote Login (TELNET); Static and Dynamic Web Pages; Search Engines; E-Commerce; E-Governance; Smart City; Censorship and privacy issues

Unit 7: Multimedia and the Web**3 LHs**

Introduction; Elements of a multimedia system; Graphics; Sound; Image File Format; Web Based Multimedia; Future of Web Based Multimedia; Multimedia in Business; Applications of Multimedia

Unit 8: Database and Database Management System**5 LHs**

Introduction; Database; Data Concepts and Characteristics; Database vs file System; Database Models; Database Management System; Database System Architectures; Database Applications; Cloud Database

Unit 9: Computer Security and Privacy**4 LHs**

Computer security and control; Unauthorized Access and Unauthorized Use; Protecting Against Unauthorized Access and Unauthorized Use; Computer Sabotage and protection; Computer Crime; Software Piracy; Anti-Piracy; Computer Virus, Worm, Spyware; Ethical Issues in Computer; Cyber Law; Network Security; Hardware and Software Firewall; Data and message security; Encryption and Decryption

Unit 10: Introduction to Contemporary Technologies**4 LHs**

Data Warehousing and Data Mining; BigData; Data Science; Artificial Intelligence; Machine Learning; Artificial Neural Networks; Cloud Computing; Green Computing; Virtual Computing; Blockchain Technology; Digital Marketing; Internet of Things; Remote Sensing and GIS; Business Intelligence; Social Media Strategies

Laboratory Works:

After Completing this course students should have practical knowledge of different hardware components of computer, operating systems (DOS and Windows Operating System), word processors, spreadsheets, presentation packages, database management systems, and Internet and its services.

Text Book:

1. Understanding Computers: Today and Tomorrow, Comprehensive, Morley, D., & Parker Charles S., 15th Edition, Cengage Learning, 2015.

Reference Books:

1. Introduction to Computers, Peter Norton's, Tata McGraw-Hill
2. Computer Fundamentals Concepts Systems and Applications, P K Sinha & Priti Sinha, BPB Publications
3. Fundamentals of Computers, V. Rajaraman, PHI Learning Pvt. Ltd.
4. Introduction to Information System, James A O'Brien and George M. Marakas, Fifteenth Edition, McGraw-Hill.

IT 232: C Programming

(BIM)

Credits: 3
Lecture Hours:48

Nature of the course: Theory + Practical

Course Objective:

The main objective of this course is to familiarize students with different programming concepts using C programming language.

Course Description:

This course introduces the both theoretical and practical concepts of C programming language including introduction, basic elements, I/O, operators, control statements, arrays, functions, pointers, structures and unions, file handling, and graphics programming.

Course Details

Unit 1: Introduction to C Programming

3 LHs

Introduction to Programming Language, Programming Approach: Top down and Bottom up Approach, Structured Programming, History of C, Algorithms, Pseudocode and Flowchart, Coding, Compilation and Execution, Structure of C program, Debugging.

Unit 2: Basic Elements of C

3 LHs

C Standards, C Character Set, C Tokens, Escape sequence, Delimiters, Variables, Data types, Constants/ Literals, Expressions, Statements and Comments, Library Functions, Preprocessor Directives.

Unit 3: Data Input and Output

3 LHs

Input/output operations, Conversion Specifications, Formatted I/O, and unformatted I/O.

Unit 4: Operators and Expression

4 LHs

Arithmetic operator, Relational operator, Boolean operator, Assignment Operator, Ternary operator, Bitwise operator, Increment or Decrement operator, Conditional operator, Special Operators (sizeof operator), Evaluation of Expression, Operator Precedence and Associativity, Type Conversion

Unit 5: Control Structure

5 LHs

Introduction, Conditional Statements, Decision Making and Branching, Decision Making and Looping, Exit function, Break and Continue.

Unit 6: Arrays and Strings

6 LHs

Introduction to Array, Types of Array (Single Dimensional and Multidimensional), Declaration and Memory Representation of Array, Initialization of array, Character Array and Strings, Reading and Writing Strings, Null Character, String Library Functions.

Unit 7: Functions**5 LHs**

Introduction of User defined functions, Library Functions vs. User defined functions, Function prototype, Function call, and Function Definition, Nested and Recursive Function, Function Arguments and Return Types, Passing Arrays to Function, Passing Strings to Function, Passing Arguments by Value, Passing Arguments by Address, Local and Global Variable, Scope visibility and lifetime of a variable.

Unit 8: Pointers**5 LHs**

Introduction to pointers, Advantages and disadvantages of pointer The & and * operator, Declaration of pointer, Pointer to Pointers (Chain of Pointers), Pointer Arithmetic, Pointers and Arrays, Pointers and Character Strings, Array of Pointers, Pointers as Function Arguments, Function Returning pointers, Pointers and Structures, Dynamic Memory Allocation .

Unit 9: Structure and Union**5 LHs**

Introduction, Declaration, Initialization, Array of structure, Passing structure to function, Passing array of structure to function, Nested Structure, Pointer to structure, Introduction to Union, Structure vs Union.

Unit 10: File Handling in C**4 LHs**

Concept of File, Types of file (Text files and Binary Files), modes of file, Opening and closing of File, Input Output Operations in File, Random access in File.

Unit 11: Introduction to Graphics in C**3 LHs**

Concepts of Graphics, Graphics Initialization and Modes, Graphics Function

Unit 12: Additional Features of C**2 LHs**

Enumerations, C Macros, Command Line Parameters, Storage classes in C.

Laboratory Works:

Laboratory works should be done covering all the topics mentioned above. Each topic must be followed by a practical session.

Text Books:

1. Byron Gottfried: "Programming with C," Fourth Edition, McGraw Hill Education.
2. Brian W. Keringhan, Dennis M. Ritchie, The C programming Language, Second Edition, PHI Publication.

Reference Books:

1. Deitel, & Deitel, "C: How to Program", Ninth Edition, Pearson Publication.
2. Al Kelley, Ira Pohl: "A Book on C", Fourth Edition, Pearson Education.
3. Yeshvant Kanetkar, "Let Us C", 17 th Edition, BPB publication, 2020.
4. Herbert Schildt, C The Complete Reference, Fourth Edition, Osborne/McGraw- Hill Publication.
5. K.N. KING: C Programming: A Modern Approach, Second Edition
6. E. Balagurusamy, Programming in ANSI C, Eighth Edition, TMH publication, 2019

MGT 231: Foundation of Business Management

(BIM)

Credits: 3
Lecture Hours: 48

Course Objectives:

The course aims to impart the knowledge of fundamental management principles and integration of those principles with the real time business situation and managerial activities that they have to perform in future so as to enhance their managerial capability and enable them to apply in the practical field. The course will remain important in the development of the soft skills of the students.

Course Description:

This course covers introduction of the management that covers the concept, functions and roles of a manager and business environment and their analysis for the purpose of business use. It also incorporates major principles of management that covers classical and recent management principles. Similarly it covers some fundamental concepts and philosophies of business ethics and social responsibility. The fundamental functions of a manager has also been incorporated in the course with the Nepalese management practices.

Learning Outcomes:

On completion of this course, the student will be able

- a. To understand the concept of business, management and business management, role and functions of manager and analysis of business environment using porter model.
- b. To understand the unethical behaviour in business and ethical behaviour as well the additional social responsibility of the business.
- c. To know the philosophical aspects of management with the understanding of management culture
- d. To know the functions of a manager and develop skill to apply them in practice.
- e. To communicate, present and play as a role of manager with the development of soft skills.
- f. To understand business management trends and scenario in Nepal

Learning Strategies:

- *Quizzes/ Surprise Test:* Quizzes to be taken individually without prior information. The quizzes is to be taken using objective questions covering the related text chapter materials.
- *Project & Live Projects:* The students should work in team for producing live project report as a part of experiential learning. They should go to the field, collect real time data and develop report. They also should present it in the class within 10 minutes of each group.
- *Case analysis:* The students should submit analysis of the cases provided by the course instructor reflecting the text/ practice related problems, genesis of the problems. It may be presented in class too.

- *Assignments:* The students tend to develop and deliver a presentation of 15 minutes on contemporary issues that are worthy enough. Home assignment in preparation of term paper can be provided.
- *Simulation:* The students need to participate in the activities that are set inside the class room. Course Convenor should provide issues and make practice as in real life situation.
- *Term paper & Thematic review:* The course convenor should provide issues that are importantly raised in the society and ask students to review related articles and develop the theme as the part of term paper and ask them to present in the class.
- *Oral Presentation:* The convenor should provide issues a day before and ask them to speak 5-10 minutes without any supportive materials in the class.

Course Details:

Unit 1: Introduction

6 LHs

Concept of management and business management, the management process, type of managers (general, functional and line managers), basic managerial roles and skills, changing job of managers, management challenges, acquaintance to task and general environment of business and analysis of task environment using Porter model.

Activities: Preparation of company profile focusing task environment and case analysis.

Unit 2: Philosophical Aspects of Management

6 LHs

The classical philosophy (scientific management, administrative management and bureaucratic management), behavioural management philosophy (human relation movement and Hawthorne studies), system and contingency philosophy and emerging issues and challenges in Nepalese business.

Activities: Surfing and finding out the techniques of using these theories in practice and presenting in class.

Unit 3: Business Ethics and Social Responsibility

4 LHs

Ethical issues in management, the roots of unethical behaviour, philosophical approaches to ethics, social responsibility of business and arguments for social responsibility and Friedman doctrine.

Activities: Oral presentation on social and ethical issues in Nepalese business and society and case analysis.

Unit 4: Planning and Decision Making

7 LHs

Planning: Meaning and levels of planning, planning horizons, planning process, meaning and use of single use, standing, contingency and derivative planning, pitfalls and their improvement in planning.

Decision Making: Concept of decision making, process of rational decision making, type of problems and decision making, decision making conditions and styles.

Activities: Simulation and case analysis

Unit 5: Organizational Architecture

7 LHs

Meaning and concept of organizational structure and architecture, elements of organizational architecture, designing structure: vertical differentiation (Tall Vs. Flat), horizontal differentiation (Functional, multidivisional, geographical and matrix), and

integrating mechanisms (formal knowledge network and strategy, coordination and integrating mechanisms), definition and source of authority, responsibility and accountability and creating accountability in business organizations, emerging issues in organization design and architecture, Nepalese practices in organizational structure.
Activities: Project work and case analysis.

Unit 6: Organizational Culture

4 LHs

Meaning and concept of organizational culture, importance of organizational culture, change and strengthening organizational culture, managing organizational culture during merger, organizational culture in Nepalese organization.

Activities: Term paper on culture after merger and case analysis

Unit 7: Group and Team

4 LHs

Meaning of team and group, difference between team and group, importance of team in organization, creating effective team, types of group and team, managing team conflict, position of team work in Nepalese organization.

Activities: Simulation and case analysis.

Unit 8: Communication and Control

5 LHs

Meaning of business communication, communication process, parties involved in communication, communication barriers and their improvement, meaning, process and types of control, essentials of effective control system, control tools and techniques.

Activities: Simulation, oral presentation and case analysis

Unit 9: Business Management Trends and Scenario in Nepal

5 LHs

Growth of business sector in Nepal, major industries in Nepal – manufacturing, export – oriented, import- substitution, and service sector, existing management and business practices in Nepalese business, major problems of Nepalese business

Activities: Live project and presentation

Reading Materials:

Charles W. L. Hill & Steven L. McShane (2008). *Principles of Management*. Irwin: McGraw-Hill.

Stephen P. Robins & David A. Decenzo (2008). *Fundamentals of Management*. Delhi: Pearson Education Inc.

Ricky W. Griffin (2012). *Management Principles and Applications*. New Delhi: CENGAGE Learning

Chalise, M. & Gautam, P. K. (2021). *Principles of Management*. Kathmandu: KEC Publication and Distributors (P.) Ltd.

MTH 204: Basic Mathematics

(BIM)

Credits: 3
Lecture Hours:48

Course Objectives

The purpose of this basic mathematics course is to increase students' mathematical knowledge and skill required to understand management, IT and computing courses as it applies to many aspects of business and to help make them a more valuable player in the business arena.

Course contents

Numbers and their properties. Introduction to complex numbers, Concepts of Functions, Limits and Continuity. Differentiation and Its Application in business and economics. Concepts of integration and its application. Differential Equations. Concept of vectors and matrices. Method of least square.

Course Details

Unit 1: Set Theory and Real Number System

6 LHs

Concept, notation and specification of sets, Types of sets, Relation between sets, Venn diagrams, Operations on sets. Laws of algebra of sets (without proof), Number of elements in a set and the problems relating up to three sets. Sets of numbers (Natural numbers, Integers, Rational numbers, Irrational numbers, Real numbers), Representation of real numbers on the real line. Properties (addition multiplication, cancellation, distributive, order) of real numbers (without proof), Inequalities and their properties. Intervals, Modulus of a real number and its properties.

Unit 2: Complex Numbers

4 LHs

Definition of a complex number, Integral powers of i , Algebra of complex numbers (sum, difference, multiplication, division), Properties of complex numbers, Conjugate of a complex number and its properties, Modulus of a complex number and its properties, Representation of a complex number by a point in a plane (Argand's diagram), Polar representation of a complex number, Square roots of a complex number, De-Moivre's theorem (statement only) and its application to find up to cube roots of a complex number.

Unit 3: Functions, Limits and Continuity

6 LHs

Constant and variable, Concept of functions, Types of functions, Graphic representation of algebraic, logarithmic and exponential functions, Computation of functional values, Domain and range of a function. Application of functions to business and economics. Idea of a limit, Limit of a function at a particular point and at infinity, Properties of limits (without proof) and use in evaluating limits involving algebraic functions. Concept of continuity and discontinuity, Test of continuity and discontinuity for simple algebraic functions.

Unit 4: Differentiation and Its Application**8LHs**

Average rate of change, Definition of derivative, Derivative as a slope of tangent to the curve, Differentiation by the first principle of algebraic, logarithmic and exponential functions, Methods of differentiation (power rule, sum rule, product rule, quotient rule chain rule), Differentiation of implicit and parametric functions, Increasing and decreasing function, Stationary point, Point of inflection, Higher order derivatives (up to 3rd order). Economic applications of derivatives for maximum and minimum points.

Unit 5: Integration and Its Application**6 LHs**

Concept of integration, Techniques of integration (Standard forms, Substitution method, Integration by parts), Integration of algebraic, logarithmic and exponential functions. Definite integral, Methods of evaluating definite integrals, Area under a curve, Application of integration in business and economics (including consumer's surplus and producer's surplus).

Unit 6: Differential Equations**5 LHs**

Introduction to differential equation, Order and degree of a differential equation, Solution of a differential equation, General and particular solutions. Equations of the first order and first degree: a) variables separated from b) homogeneous equations c) linear equations (without involving trigonometric functions).

Unit 7: Vectors**5 LHs**

Definition of a vector in a plane and space, Directed line segment, Magnitude of a vector, Types of vectors, Multiplication of a vector by a scalar, Addition of vectors, Parallelogram law of addition of vectors, Collinear and coplanar vectors, Linearly dependent and independent vectors, Scalar product of two vectors, Orthogonal vectors, Vector product of two vectors. Numerical Exercises

Unit 8: Matrices and Determinants**6 LHs**

Introduction of matrices, Types of matrices, Equality of matrices, Algebra of matrices, Transpose of a matrix. Determinant of a Square matrix, Minors and cofactors of matrix, Singular and non-singular matrix, Adjoint and inverse of matrices. Solution of a system of linear equations up to three variables (Cramer's rule, Inverse matrix method, Gaussian elimination method).

Unit 9: Least square method**2 LHs**

Introduction to least square method, Line of best fit (two variables only), Measurement of trends, Method of least square for time series analysis.

References

Anthony Martin and Biggs Norman, *Mathematics for Economics and Finance: Methods And Modelling*, Cambridge University Press.

Bradley Teresa, *Essential Mathematics for Economics and Business* 4th Edition, Wiley.

Brechner Robert, *Contemporary Mathematics for Business and Consumers*, Thomson South-Western.

Dowling Edward, *Schaum's Outline of Mathematical Methods for Business and Economics*, McGraw-Hill.

George B. Thomas and Ross L. Finney, *Calculus with Analytic Geometry*, Addison – Wesley, 9th Edition.

Rosser Mike and Lis, Piotr, *Basic Mathematics for Economists* 3rd Edition. Routledge.

Taro Yamane, *Mathematics for Economics*, Prentice-Hall of India, New Delhi, 2nd Edition (An Elementary Survey).

Wegner Trevor, *Applied Statistics: Methods and Excel-Based Application*, Juta Academics.