



# 不見可でいるだめ、可な可いの可えが一つという。 で見るである。 で見るである。 で見るである。 ROYAL UNIVERSITY OF BHUTAN SHERUBTSE COLLEGE

Definitive Programme Document for the Bachelor of Digital Communication and Project Management Programme

Royal University of Bhutan February 2025

# **Table of Contents**

1. Programme Specification	3
1.1 Basic information on the programme	3
1.3 Career related opportunities	4
1.4 Programme Structure	5
Broad Field and Module Code	5
1.5 Learning and Teaching Approach	6
1.6 The Assessment Approach	7
1.7 Regulations	7
1.8 Planned Student Numbers	8
1.9 Programme Management, Quality Assurance and Enhancement	g
1.10 Academic Staff	11
1.11 Resource needs	13
2. Module Descriptors:	15
Year 1 Modules	15
BLM101 Foundations of Project Management	15
EPS101 Introduction to Environmental and Global Economics	19
DAT101 Statistical Computing I	25
LAC101 ह्ट्-प्यानेषाध्येष्ठा विद्या	37
<b>कुंद्र कंद्र 'काद्य दृष्ट ' LAC</b> 101 हॅंद्र 'या देव 'पॅद्र 'तही हत्य	37
CSP101 Foundations of Python Programming	44
MAC101 Foundation of Digital Communication	50
DAT102 Foundations of Data Science	54
LAC103 Academic Research Skills	61
LAC102 養元''[r' 義本'元即	66
Year 2 Modules	81
MAC201 Communication in the Digital World (Social Media Ecosystem)	81
MAC202 Data Scriptwriting and Storyboarding	87
BML201 Agile Project Management	91
BML202 Project Governance in Project Management	96
CRD303 Professional Certification (Deep Domain Specialisation)	100
DAT208 Web Analytics & Data Communication	103
MAC203 Communications via Transmedia and Gamification	107
BML203 Project Planning & Operations	111
BML204 Project Quality and Risk Management	117
Year 3 Modules	121
BML301 Advanced Project Management	121

Electives	Error! Bookmark not defined.
CRD304, Deep Experiential: Industrial Capstone Project	142
CRD303 Professional Certification (Deep Domain Specialization)	140
CRD301 Advance skills for Career Development	135
CRD302 Deep Domain Mini Project	131
BML302 HRM & Leadership	126

# 1. Programme Specification

# 1.1 Basic information on the programme

Name of the home base college: Sherubtse College, Kanglung, Bhutan

Title of the award: Bachelor of Digital Communications and Project Management

**Duration and mode of study:** 3 years, full time

Awarding Granting Body: Royal University of Bhutan

Date of Initial Approval: 12 December 2022,

# 1.2 Aims and Learning Outcomes of the Programme

# 1.2.1 Aims of the programme

The Bachelor of Digital Communication and Project Management programme aims to provide a holistic platform for students striving to create and contribute to knowledge generation in an era driven by technology, digitization and an ever-changing multicultural economy. The proposed programme will be the first of its kind, offering students the know-how and skills to be professional project management practitioners equipped with the apt leadership and communication skills necessary for today's digital world.

This programme will help students to learn such as the skills to lead, manage and complete complex non-digital and digital projects individually or in teams, the skills to use all forms of modern-day communication available in person and the digital world and the skills to generate and use data efficiently. It will also offer students the opportunity to learn and practice the hard skills of project management and the soft and technical skills of digital communication simultaneously, addressing industrial skills gaps and bringing more value to the organization.

This programme will offer an array of theoretical concepts and skill sets necessary for students to be ready to take up any form of employment in the local and global markets. The project management modules would enable students to apply knowledge of project management to initiate, plan and execute complex projects and the digital communication modules would offer students the opportunity to explore innovative digital media, develop a high level of critical thinking and strategic planning skills, create relevant and efficient digital content and manage various digital communication tools. In addition, the proposed programme will encourage the development of ethical and professional responsibility, and organizational performance, all of which are the necessary skills and knowledge required to excel in today's world.

This program will address the need of trained professionals in digital communication and project management, who will be able to contribute significantly towards achieving the national goal of economic prosperity rooted in efficiency of individuals to function in a digitalized work environment and efficacy of the work or the project they undertake in all works of life. The broad focus of the programme is on:

- Building foundational skills in statistical computing, project management, economics of things, digital communication, programming, data science and research skills.
- Developing proficiency in digital communication, managing projects, business analytics, handling data, web analytics, and risk management.
- Creating individuals who can exercise leadership, creative public speaking and manage projects at international standards.
- Developing creative problem-solvers and fostering innovative thinking.
- Facilitating the sharing of knowledge, skills, and best practices across diverse projects to promote practicality and collaboration

- Building skills to lead and manage diverse, interconnected projects while leveraging digital communication to complement project management and creative problem-solving.
- Applying comprehensive knowledge of project management on developing project scope, understanding and managing potential hazards, risks, ensuring quality standards, and performance measures, and effectively communicate with all relevant parties.
- Understanding the significance of ethics and social responsibility in project management and to increase
  engagement and encourage participation in the comprehensive safety training program or compliance
  training, gamification elements are utilized to pique learners' interest in the material.
- Demonstrate the capacity to think critically, find solutions to challenges, and communicate effectively to lead projects in an environment that is both complicated and dynamic, in which project outcomes are frequently unforeseen.

# 1.2.2 Learning outcomes of the Programme

Upon completion of the programme, graduates will be able to:

- 1. ability to lead and manage a wide variety of projects.
- 2. apply a thorough understanding of the complex project's scope, hazards, risk, quality, and performance measures, and communicate efficiently with all parties involved.
- 3. Ability to handle heavy data/heard coders and link to business purposes.
- 4. Appreciate the importance of ethics and social responsibility in the project management process.
- 5. Demonstrate the capacity to think critically, find solutions to challenges, and communicate effectively to lead projects in an environment that is both complicated and dynamic.
- 6. Assess appropriate methods to develop the solutions to real-world problems.
- 7. Analyse quantitative and qualitative aspects of data for decision-making and situational analysis.
- 8. Validate results using appropriate statistical methods.
- 9. Communicate findings through documentation, discussion and/or presentation.
- 10. Exhibit critical thinking and logical reasoning in the problem-solving process.
- 11. Demonstrate ability to work as a team, listen and respond to others, and use negotiation and conflict-resolution skills.

### 1.3 Career related opportunities

The Royal University of Bhutan (RUB) seeks to ensure quality higher education to meet the opportunities and challenges posed by the 21<sup>st</sup> century. In doing so, the University has made efforts to initiate reforms in the higher education system in Bhutan, as part of this reform Sherubtse College will introduce a new programme in Bachelors of Digital Communication and Project Management.

This programme will provide students with skills that are directly relevant to the job market. The program will develop essential skills in leadership, communication, planning, budgeting, time management, and risk management, which are highly valued by employers in today's labour market.

The program aims to develop graduates who can directly engage in various professions. Upon graduation, students can pursue careers as project managers and be responsible for overseeing the planning, execution, and delivery of projects within an organization. They can also work as business analysts, engaging with stakeholders to identify business needs and opportunities. Graduates can pursue careers as operations managers, responsible for ensuring the smooth running of operations in an organization. Additionally, the program will equip students with the skills required to become construction managers, IT project managers, event managers, and non-profit managers engaged in fundraising and coordinating with volunteers and other stakeholders.

# 1.4 Programme Structure

Yr.	Sem	Module 1	Module 2	Module 3	Module 4	Module 5
1	I	BML101 Foundations of Project Management	EPS101 DAT101 Introduction to Environmental & Statistical Global Economics Computing		LAC101 Dzongkha Sháyoen Drétsóel	CSP101 Foundations of Python Programming
'	11	MAC101 Foundations of Digital Communication	DAT102 Foundations of Data Science	LAC103 Academic Research Skills	LAC102 Dzongkha Tsómdé	Elective I
2	I	MAC201 Communications in the Digital World (Social Media Ecosystems)	MAC202 Data Scriptwriting & Project Storyboarding Management		BML 202 Project Governance in Project Management	Elective II
_	II	DAT208 Web Analytics & Data Communications	MAC203 Communications via Transmediality & Gamification	BML203 Project Planning & Operations	BML204 Project Quality & Risk Management	Elective III
3	I	BML301 Advanced Project Management	BML302 HRM & CRD302 Deep Domain Mini Project		CRD301 Advanced Skills for Career Development	Elective IV
3	CRD303 Professional Certification (Deep Domain Specialization)  CRD304 Deep Experiential: Industrial Capstone				trial Capstone	Elective V

# **Broad Field and Module Code**

Broad Field	Module Code
Business Management and Leadership	BML
Economifs and Political Science	EPS
Design and Technology	DXT
Data Analysis and Analytics	DAT
Computer Science and Programming	CSP
Media and Communications	MAC
Language and Composition	LAC
Career Readiness and Development	CRD

The programme duration is three years comprising six semesters. In the year I - semester I and Semester II is a foundation year in which students will be introduced to common foundation modules that include introduction to programming, research skills, Dzongkha modules and an elective module.

Year II of the program focuses on deep learning in Digital Communication and Project Management, preparing students for industry capstone projects in their third year. Additionally, students will acquire skills in communication, planning, data analysis, and risk management

Year III, semester I is dedicated to advanced learning focused on application in industry capstone projects. In this semester, students will also develop leadership and advanced management skills to prepare for miniprojects. Year III, semester II is entirely devoted to the industry capstone project, where students will gain deep experiential learning and acquire necessary skills by focusing on a specific study or thematic area.

The programme will be structured to build on previous topics with five modules per semester, consisting of core, common, and elective modules, except for Year III, semester II, which focuses solely on the industry capstone project, worth 36 credits. Each module, except for the capstone project, is worth 12 credits, with a total of 360 credits required for graduation.

# 1.5 Learning and Teaching Approach

The program's learner-centred teaching approach is designed with progressive stages of learning, including contact hours, practical and independent learning. In this environment, students will gain in-depth knowledge and relevant skills for industry. As such, the programme will focus on 80% applied learning and 20% theory lessons to promote industry competency. The following teaching and learning pedagogies will be used for the program:

- **I. Modern inquiry learning:** focused on the following learning outcomes:
  - The ability to save and retrieve information in a variety of formats
  - The ability to participate in more complex projects
  - o The ability to reuse and build upon the work of others
  - The ability to quickly obtain learning feedback from multiple source
- II. Modern self-directed learning: Focused on the following learning outcomes:
  - The ability to generate large amounts of data about our technology-based activities.
  - The ability to view the learning artefacts of others.
  - The ability to participate in virally amplified online activities and events.
  - The ability to learn in the same communities as experts and professionals.
- **III. Modern social learning: with emp**hasis on the following learning outcomes:
  - The ability to access high-quality content whenever and in whatever format needed.
  - The ability to publish using a variety of media for low or no cost.
  - o The ability to form learning networks.
  - The ability to form highly interconnected groups around an object of interest.

To achieve these objectives, the program will use various teaching and learning strategies, including interactive lectures, class discussions, written assignments, oral presentations/public speaking, project works, case studies, portfolios, prototype building, problem-solving based assignments, group activities, field trips, class tests, reflective reports, workshops, and seminars, tailored to each module's learning objectives. Additionally, the program will progressively increase independent learning time for students in subsequent years, with a focus on deep experiential and applied learning. In the final semester, students will work closely with an expert supervisor to achieve the outcome of the design capstone project, which will equip them with the skills to create jobs or obtain employment in various organizations and companies.

# 1.6 The Assessment Approach

The assessment approach will be entirely formative to frequently assess whether learning objectives are being met. This will be supplemented with immediate feedback to ensure students identify their own gaps and work with their tutors towards filling them. Assessment will take the following forms:

- Written assignment
- Practical assessment/practical skills demonstration
- Elevator pitch
- Guided discussion
- Oral presentation/public speaking
- Project work
- Portfolios
- Prototype design
- Problem-solving based assignments
- Quiz
- Class test

The weightage of formative assessment components will differ based on the nature and objectives of each module.

For the capstone project, the assessment is rigorous and based entirely on the research process, shown through a written report and the oral presentation of the project. The project report accounts for 70% of the total weightage, and oral presentation will account for 30%.

# 1.7 Regulations

# 1.7.1 Entry requirements

To be eligible for this programme, candidates must have completed Bhutan Higher Secondary Education Certificate (BHSEC) or equivalent with a minimum of 50% in either Business Mathematics or Pure Mathematics. A total of 600 candidates with the highest ability rating points will be shortlisted candidates for a test, and will be eligible to take and the top 100 from the test will be selected for admission into the three programmes. After completion of first year modules, students will opt for one of the three programmes based on performance and interest.

Programme	Eligibility Criteria	Ability Rating
Bachelors in Digital Communication and Project Management	Class XII pass candidates with a minimum of 50% in Mathematics and/or Business Mathematicrtis	Mathematics/Business Mathematics - 5 English - 3 Dzongkha - 3 Other Subjects 1-2

The weighting assigned to a subject is based on the relevance of the subject to the programme. The selection criteria are subject to revision as per the policy guideline of the RUB and Sherubtse College. Progression from one level to another level will be determined by University progression regulation specified in the Wheel of Academic Law (WAL) of the RUB and Sherubtse College Academic Guidelines.

#### 1.7.2 Assessment and progression requirements

To pass a module, a student must obtain a minimum of 50% overall, including both the continuous assessment (CA) and semester-end examination (SE). However, a student must obtain a minimum of 40% each in CA and

SE. Note that all the assessment categories are mandatory and must achieve a pass mark (minimum 40%) in each assessment category.

#### 1.7.3 Re-assessment

A student is eligible for re-assessment if the number of failed modules is less than 30% of the total number of modules prescribed for the semester. Upon passing the failed module(s) in re-assessment, a student will not be awarded more than 50%, this being the minimum pass mark.

# 1.7.4 Repeat Module(s)

A student may repeat a failed module any number of times within the normal registration period for completing an award, where he or she:

- Has failed in the re-assessment of a module(s). In such an event, the student shall meet all assessment requirements of those modules, both CA and SE. For students under this category, attendance in lectures is not mandatory.
- Has failed more than 30% of the total number of modules prescribed for that semester. In such an
  event, the student shall meet all teaching, learning and assessment requirements of the failed
  modules. For students under this category, attendance in lectures is mandatory.
- For any particular semester, a student cannot register for more than 2 repeat modules in addition to the modules prescribed for the semester

# 1.7.5 Role of Programme Board of Examiners

The Board of Examiners shall, in the light of the University's general assessment regulations and the programme specific regulations, determine, for each module, the mark to be assigned to each student's performance. The Programme Board of Examiners shall determine whether each student shall:

- be eligible for an award
- be allowed to continue on the programme, possibly with provision for re-assessment in certain modules and/or for the repeat of certain modules, or
- be required to withdraw from the programme

Detailed information on progression criteria is available in "D1 Re-assessment and Repeat of a Module" of "The Wheel of Academic Law" (www.rub.edu.bt).

# 1.8 Planned Student Numbers

The student intake for the next five years for the programme is reflected in the following table. An annual intake of 25 students per cohort will be admitted. This is to ensure quality teaching, learning, and assessment. With this number, it is also intended to produce highly skilled, knowledgeable and motivated graduates to fulfil the needs of 21st century job markets. With the commencement of *Gyalsung*, no student will be admitted in the 2024 academic year.

Year	2023	2024	2025	2026	2027
Year 1	25	25	25	25	25
Year 2		25	25	25	25

Year 3			25	25	25
Total	25	50	75	75	75

# 1.9 Programme Management, Quality Assurance and Enhancement

To ensure quality and proper monitoring both in terms of delivery and assessments, a closely coordinated system of programme management mechanisms are in place that is in line with the guidelines spelt in "The Wheel of Academic Law" (<a href="www.rub.edu.bt">www.rub.edu.bt</a>) and the "Academic Affairs Guidelines" (<a href="www.sherubtse.edu.bt">www.sherubtse.edu.bt</a>). This is enabled through specific responsibilities delegated to dedicated staff and institutions of several committees, and through timely student feedback, as outlined below.

The following sections provide an overview of the mandatory university-wide quality assurance and enhancement procedures:

# Dean of Academic Affairs (DAA)

DAA maintains and implements academic regulations/guidelines, supports and implements innovative approaches to teaching-learning and quality across all programmes in the College. DAA is responsible for maintaining the health of all programmes at the College.

# Head of the School (HoS)

HoS provides organizational and academic leadership for programmes offered by the department, and is accountable to the DAA in the day-to-day operations. HoS is responsible for maintaining the health of programmes within the department.

# Programme Leader (PL)

PL provides organizational and academic leadership for the programme and is directly accountable to the HoD. PL is responsible for maintaining the health of the programme and reporting issues related to the programme to appropriate committees. PL is also responsible for drafting the Annual Programme Monitoring Report and it's reporting to the Programme Committee and College Academic Committee and final submission to the Programmes and Quality Committee.

#### **Module Tutor (MT)**

MT is directly accountable to PL and is responsible for teaching and assessment of a particular module as per the semester plan agreed upon with the PL. Importantly, MT evaluates the relevancy and currency of the module descriptor and recommends the need for updates to the PL. When there are multiple tutors teaching the same module, a Module Coordinator (MC) is appointed, who is responsible for ensuring the health of the module as per the definitive programme document. At the conclusion of the semester, the MT (or the MC) prepares module reports for the modules taught in the semester. Module reports provide insights on issues related to the delivery of modules and plan of actions for the subsequent year, which are reported in the Annual Programme Monitoring Report.

#### **College Academic Committee (CAC)**

CAC is the highest decision-making body for all matters related to academic affairs in the College. In particular, CAC serves as the guarantor of academic standards and quality in respect of the design, delivery, development and promotion of best practice in curricula, programmes, general educational matters and research within the College. It is responsible for implementation of the University academic quality assurance policies and procedures covering the development and the monitoring of taught programmes, learning and teaching and the academic support of students within the College. CAC is chaired by the DAA, with members constituting of President, Dean of Student Affairs, Dean of Research & Industrial Linkages, elected staff representatives (HoDs & selected PLs), elected student representatives (two student leaders), representative of other groups of staff (Librarian & ICT Officer), an external member and one senor academic as a secretary.

# **Programme Committee (PC)**

At the programme level, PC is responsible for the effective conduct, organization and development of the programme, including appointment of module tutors, allocation of teaching-learning resources required for the semester. PC is chaired by the PL, with all MTs/Module Coordinators of the programme and at least three students of the programme representing different cohorts, constituting the membership.

# **Student Consultative Meetings (SCM)**

The purpose of the SCM is to involve students in the operation of programmes and in improving the effectiveness of their own education. The SCM is convened at the Departmental level once in the mid-semester. The meeting provides a forum for the students to provide feedback on all elements of the programme such as the delivery of the modules; the subject matter of the modules; the effectiveness of the teaching, learning and assessment approaches; the adequacy of teaching learning resources; progression and achievement; guidance and support as well as examples of good practice. The SCM is chaired by DAA, with HoD, PLs and at least two student representatives from each year of the programme constituting the membership.

# **Student Module Evaluation (SME)**

SME is another quality assurance and enhancement mechanism in which students are engaged in the assurance and enhancement of their educational experience. Through this mechanism, the College seeks feedback from all the students enrolled for the module in terms of module delivery, resources available, quality of learning and teaching, relevance of assessment methods, and the professionalism of module tutors. SME is done at the end of the semester through use of the RUB-wide standard module evaluation form, integrated into the VLE. The line managers (Programme Leaders, Head of Departments and Dean of Academic Affairs) at the College review the feedback for every module and actions are taken when the new semester starts.

# **Annual Programme Monitoring Report (APMR) and Module Report (MR)**

APM is a key component of the University's quality assurance and enhancement processes which provides assurance of the continued quality, standards and relevance of programmes in operation. APMR ensures that programmes leading to an award of the University meet their aims and learning outcomes effectively, while at the same time, it strives to enhance the quality of learning and teaching at the University. It is a continuous process of appraising the performance of programmes throughout the year culminating in a consolidated Annual Programme Monitoring Report at the end of the academic year. Programme Leader is responsible for compiling the APMR.

The MR provides a critical appraisal of the delivery of a module by reviewing its current strengths and weaknesses, and provides evidence upon which to plan the improvement of the module. It feeds the APMR by providing informed, evidence-based action points for the programme of which the module forms a part. Module tutor (or the module coordinator) is responsible for producing the module report.

# **Programme Board of Examiners (PBoE)**

As outlined in "The Wheel of Academic Law", the PBoE ensures that module assessments are in compliance with the validated/reviewed module descriptors and the progression of students to the next level is assessed in compliance with RUB regulations. PBoE is chaired by a senior member of the staff cognisant of the programme but not closely involved in it, with HoD, PLs, staff with assigned responsibility for assessments, and an external examiner appointed by the Academic Board constituting the membership.

### **Moderation of Assessments**

Moderation is a quality assurance process to ensure assessment is accurate, consistent and fair. It also assures that the results are an accurate reflection of performance and can be relied upon by students and staff within the university, as well as by external stakeholders. As required by the RUB regulation: "D8 Moderation of Assessments" of "The Wheel of Academic Law" (<a href="www.rub.edu.bt">www.rub.edu.bt</a>), at Sherubtse College all 'assessment tasks' and 'assessed student works' constituting 20% or more of the total assessment weighting of a module are

moderated through internal and external moderation process. Internal moderation is done by a moderation committee, consisting of tutors from the same discipline, who may or may not teach the module. External moderation is the review of examination questions and a representative sample of answer scripts, and assessed components of continuous assessment tasks for a module by the external examiner(s) for a programme.

#### **Role of External Examiners**

External examiners are independent advisers for a programme in operation. They contribute to the quality assurance and enhancement of a programme by providing an external view on assessments, student achievements, academic standards and a range of academic matters related to the delivery of a programme. The roles and responsibilities of external examiners are outlined in regulation D3 "External Examiners" in The Wheel of Academic Law.

In addition to the university-wide mandatory procedures, Sherubtse has instituted the following internal quality assurance and enhancement initiatives:

# **Department Academic Committee (DAC)**

Given multiple programmes offered by each department at Sherubtse College, the DAC of Mathematics and Computer Science is mandated with the responsibility of promoting academic quality and standards of the department, besides implementing resolutions of the CAC at the departmental level. The committee is chaired by the HoD, with PLs and all MTs constituting the membership.

#### Semester Guide (SG)

At Sherubtse College, one staff member is appointed as SG from among the module tutors for each cohort of students for every programme. SG is responsible for giving guidance on both academic and non-academic matters, which includes counselling/parenting, advising on class attendance records, and reporting specific academic needs of students to MT and PL.

#### 1.10 Academic Staff

To run the three-year DCPM programme, six faculty members are required, but currently, there are ten faculty members for the programme as all the faculty members are also engaged in teaching existing programmes such as English, History, Geography, Media Studies and Environmental Science.

Faculty members were selected based on their competencies and relevant subject backgrounds. Most of them have more than five years of teaching experience in universities, hold a master's degree qualification, and are all in regular service terms. The majority of the faculty members have backgrounds in social sciences, arts and humanities. Skills of faculties in such backgrounds transfer well to the skill requirements for the new programme. Despite some match in skill requirements, there was a need for existing faculty to acquire new skills and knowledge in preparation for successfully running the new programme. Faculty in the programme have already engaged in various training, with further training required have been identified (for details refer section on PD).

With regard to current HR mapping, the majority of the faculty members have a full workload up to June 2025 to run the old programme. However, some faculty members need to teach the new programme from July 2023, along with the old programmes. Therefore, all ten faculty members will be fully engaged in teaching old and new programmes until December 2025.

The DCPM programme has 14 core modules, including 2 common modules. For module development, each faculty member was assigned a module which they will be teaching. Even the 2 common modules will be taught by the DCPM faculty members as the programme has expertise on it. However, the programme has a gap to teach two core modules, Data Scriptwriting & Storyboarding, and Web Analytics & Data Communications, as it

could not identify a suitable person. Therefore, the programme will either train existing faculty members in 2023-24 academic year or recruit new with the expertise.

Unlike the old programme, the final year 'Capstone project', which is equivalent to three modules (36 credits), will require additional faculty members, which is not considered in the HR mapping. For this project, 4 to 5 students in a group will be assigned to each faculty member to guide them with their capstone project.

The following table shows the detail of faculty member's workload based on their competency:

Table 1: Qualification of Faculty in DCPM

SI no	Name	Qualification
1	Yezer	PhD (Social Policy)
2	Sonam Choeki Wangmo	BA (Demography)
3	Jamyang Dolkar	MSc. (Environmental Science)
4	Sangay Choden	MA (English)
5	Yeshey Wangmo	MA (Demography)
6	Anju Chhetri	MA (Media Studies)
7	Dr.Chitra S	PhD (English)
8	Sangay Lhaden	MSc (Strategic Digital Marketing)
9	Phub Dem	MSc Project Management

Table 2: Work Load of Faculty in DCPM

		Spring 2024		Autum	n 2024	Spring	2025	Autum	n 2025
SL no	Name	New prog	Old prog	New prog	Old prog	New prog	Old prog	New prog	Old prog
1	Yezer		2	1	1	1	1	2	
2	Sonam Choeki Wangmo		2	1	1	1	1	2	
3	Jamyang Dolkar		2	1	1	1	1	2	
4	Yeshey Wangmo	1	2	1	1	1	1	2	
5	Anju Chhetri	1	1	1	1	2	1	1	
6	Dr.Chitra S		2	1		1	1	2	
7	Sangay Lhaden	1	1	1	1	1	1	1	

8	Sangay Choden	1	1	1	1	1	1	1	
9	Phub Dem			1	1	1	1	1	

# **PD Program**

The majority of faculty members have indicated a strong interest in a professional development program focusing on project management and digital tools and techniques, including training sessions on MS Project and Excel for project management. Additionally, there is a subset of faculty who have expressed a desire for training in areas such as business analysis, data governance, gamification, transmedia design, and other related topics. Furthermore, it is evident that there is a need for a professional development program covering data scriptwriting, storyboarding, web analytics, and data communications, as these topics are not frequently included in existing course offerings.

Table 3: Professional Development Details for faculty in DCPM

Name	PD Taken	PD Required
Yezer	Basic course on Project Management	Advance Project Management and MS Project/ Excel for PM
Sonam Choeki Wangmo	Foundations to Project Management, Agile Project Management (Basics)	Agile PM tools/methodological approaches, PM tools, Global Business Analytics and data governance
Jamyang Dolkar	Foundations to Project Management	PM Tools and Techniques, Agile PM
Yeshey Wangmo	Foundations to Project Management	PM Tools and Techniques, MS Project/ Excel for PM
Anju Chhetri	Introduction to Project Management, Digital Marketing	Design, Skills in use of PM Tools, Marketing Tools
Sangay Choden	Foundations to Project Management	PM Tools and Techniques, MS Project/ Excel for PM
Sangay Lhaden	Completed MSc in Digital Communication	UIUX, Gamification and Web analytics
Phub Dem	Completed MSc in Project Management	PMI Certification

# 1.11 Resource needs Accommodation

Sherubtse has 20 on-campus residential accommodations - 10 female residences and 10 male residences. By July 2023 it is expected that the students' intake will be reduced and therefore, the new batch of students can be easily accommodated in the existing hostels.

Status of accommodation is as follows:

Type of accommodation	No. of Units	Total Capacity	
For Men	10	80*10=800	
For Women	10	80*10=800	
Total	20	1600	

# **Library Support**

Sherubtse College Library has a good collection of subject-specific books, journals, and periodicals of various disciplines. The library also has access to online journals and e-library facilities such as ProQuest eBook Central, JSTOR, EBSCO, DOAJ, etc. Furthermore, the college plans to maximize the use of online resources, or the E-library and leverage on free resources available, such as DITT's Udemy, O'Reilly library and other online resources.

# **Computing Support**

Currently, the College has three computer labs with 30 computers each with Internet connectivity. The labs are also equipped with Wi-Fi facilities, which enables students to use their personal laptops. However, to meet the requirements of the new programmes, the management has committed to procuring high-end computing machines (each with 16 GB RAM, i7) in all the labs (90 computers). The programme will use a common computer lab set up for the new proposed programmes.

#### Software

The programme will use open source and free software package

# **Other Support Facilities**

The college has the following support facilities for the smooth functioning of the programme:

- Reading Space: There are spacious reading places in the library, student service centre and around the academic block of the College for students' use after class hours.
- Wi-Fi connections are available around the academic blocks, student service centre, library and the
  administrative building. Further, there is a dedicated lab with Wi-Fi facilities available from 8.30 am to 10
  pm for the students' use.
- Student service centre also has a counselling centre with the three trained counsellors who are available
  as and when students require. Further, a toll-free number 6006 can be contacted any time for availing
  counselling related services.
- Student service centre also has a Happiness and Wellbeing Center that frequently conducts Mindfulness and Yoga sessions, which can be attended by interested students. It also has a mini library with books related to mindfulness and personality development.
- Student Service Centre also hosts a reprographic centre where students can avail printing and photocopying services with nominal charges.
- To promote the conducive teaching and learning environment, a minimum of two rooms will be converted and called Sherubtse Digital Studio. These rooms will facilitate students and staff to discuss related academic matters and activities in a congenial environment despite normal classroom settings. Specifically, these rooms will be useful for the industry capstone project management, where different groups of students and staff will be discussing their ideas and issues to achieve their learning outcome. It is recommended that these rooms are designed well with moveable furniture and require facilities.

# 2. Module Descriptors:

#### Year 1 Modules

Module Code and Title: BLM101 Foundations of Project Management Digital Communication and Project Management

Credit Value: 12

Module Tutor: Sonam Choeki Wangmo

# **General objectives**

The module aims to provide students with a comprehensive introduction to the fundamental principles of project management. Through a diverse array of teaching methodologies, including theoretical instruction and handson class activities, students will acquire a robust understanding of key project management concepts and terminologies. The curriculum is designed to equip learners with practical skills in applying various project management tools and techniques, enabling them to effectively tackle real-world challenges across diverse project types. By engaging with case studies, students will gain valuable insights into the practical application of project management principles, enhancing their ability to analyze and solve complex project-related problems. Ultimately, the module seeks to cultivate a strong foundation in project management, empowering students to confidently navigate and successfully manage projects in their future professional endeavors.

#### Learning outcomes

On completion of this module, students will be able to:

- 1. demonstrate a comprehensive understanding of fundamental project management concepts and terminologies.
- 2. apply key project management tools and techniques to solve practical problems in various project scenarios.
- 3. analyze and evaluate case studies to gain insights into real-world project management practices.
- develop critical thinking skills in the context of project management decision-making.
- 5. collaborate effectively in group settings to complete project-related tasks and discussions.
- 6. utilize relevant project management tools for planning, execution, and monitoring of projects.
- 7. interpret and apply theoretical knowledge to practical project management situations.
- 8. demonstrate the ability to manage projects across different industries and contexts.
- 9. engage in self-directed learning to continuously improve project management skills and knowledge.

**Learning and Teaching Approach** 

Туре	Approach	Hours per week	Total credit hours
Contact	Teaching	2	35
Contact	Practical exercises	2	25
Independent	Independent study, guest lecture and project work	4	60
	Total		120

### Assessment approach

Assessment will be carried out on a continuous basis through the following assignments:

#### a. Development of a Project Charter (10%)

As an individual assignment, students will develop a project charter for a project of their choice. The project should be related to a topic of their interest or an area of study. Students should carefully consider their choice of project, as it will be used in assessment 3 and 4.

# **Project Charter Assessment Criteria**

5 marks Content: Clearly defines project scope, objectives, stakeholders, and

constraints.

2 marks Coherence and clarity: Logical flow, well-structured, and easy to

understand.

2 marks Creativity and originality: Demonstrates innovative thinking and unique

approach.

1 mark Compliance with assignment requirement: Adheres to APA guidelines,

formatting, and submission criteria.

# b. quiz (15%)

In this case study, the students will delve into the critical realm of Agile methodologies and their application in real-world scenarios. By selecting and dissecting a specific business scenario, they will gain hands-on experience in scoping challenges, choosing the appropriate Agile framework, forming effective cross-functional teams, and implementing Agile practices. This task equips them with the skills to align Agile principles with organizational goals, prioritize value delivery, create value roadmaps, and measure success through relevant KPIs. Ultimately, it empowers students to develop practical recommendations for sustaining Agile practices, preparing them for careers in today's dynamic business landscape, where agility and value creation are paramount. This assessment will assess the learning outcomes 1, 7, and 8.

#### **Quiz Assessment Criteria**

5 marks Scoping the Scenario: Clearly defines the business problem, context,

and constraints.

5 marks Agile Framework Selection: Justifies the choice of an Agile framework

with relevance to the scenario.

5 marks Team Formation and Roles: Defines team structure, roles, and

responsibilities effectively.

5 marks Agile Practices Implementation: Applies Agile practices appropriately

to address the scenario.

5 marks Value-Driven Approach: Aligns Agile implementation with value

delivery principles.

5 marks Creating the Value Roadmap: Develops a clear roadmap outlining key

Agile milestones.

5 marks Measuring Success: Identifies and justifies relevant KPIs for

evaluating Agile success

5 marks Conclusion and Recommendations: *Provides insightful* 

recommendations for sustaining Agile practices.

#### c. Case study (30%)

The students will select either a completed or ongoing project within the Trashigang area that aligns with their previously developed project charter from Assessment 1. They will then embark on a comprehensive analysis, evaluating the project's adherence to established project management frameworks, including project phases, life cycles, process groups, and the integration of the 8 performance domains or 10 knowledge areas. This in-depth examination will span from the project's inception to its current state or completion. Upon concluding their case study report, the students will synthesize their findings into a concise yet impactful 5-minute oral presentation. This presentation will not only encapsulate the essence of their project charter and case study report but also

showcase their ability to distill complex project management concepts into clear, actionable insights. Through this assignment, students will hone their analytical skills, creative problem-solving abilities, and professional communication competencies, all while gaining hands-on experience in real-world project management scenarios. This assessment will assess the learning outcomes 3, 5, and 6.

# **Case Study Assessment Criteria**

For case study report

20 marks Content: Depth of analysis, alignment with project management

frameworks, integration of project phases, life cycles, and performance

domains/knowledge areas.

3 marks Coherence and clarity: Logical flow, structured argument, clarity in

explanation.

2 marks References: Proper citation, credibility of sources, adherence to APA

academic standards.

For presentation

2 marks Content: Concise summary of key findings and disussions, relevance to

project charter and case study.

2 marks Creativity and engagement: Effective use of visuals, storytelling,

audience engagement.

1 marks Time management: Adherence to time limit, smooth pacing

# d. Collaborative Project Management Plan Development (45%)

In this group assignment, students will collaborate in teams of 5-6 to develop a robust project management plan based on a previously selected project charter from Assessment 1, incorporating insights and recommendations from Assessment 2. The learners will apply various project management tools and techniques to create a detailed plan that addresses key aspects of project execution, monitoring, and control. The assignment will culminate in a 15-minute video presentation, where the students will succinctly summarize their project management plan, highlighting its key components and strategies. This task is designed to enhance the students' ability to work effectively in teams, apply theoretical concepts to practical scenarios, and develop crucial presentation skills. The assignment will be evaluated based on its thoroughness, practicality, and alignment with best practices in project management, while the video presentation will be assessed on clarity, content, and the team's ability to effectively communicate their plan's core elements. This assessment will assess the learning outcomes 4 and 9.

#### **Project Management Plan Development Assessment Criteria**

For the written assignment

5 marks Thoroughness of the Plan: Clear objectives, scope, and deliverables

with well-defined strategies.

5 marks Practicality and Feasibility: Realistic implementation with consideration

of constraints.

6 marks Application of Project Management Tools: Effective use of frameworks

and methodologies.

5 marks Incorporation of Insights from Previous Assessments: Logical

integration of past feedback and analysis.

4 marks Clarity and Organization: Well-structured, logically sequenced, and

professionally presented.

For the presentation;

2 marks Clarity of Communication: Logical flow, articulation, and ease of

understanding.

3 marks Content Quality: Accuracy, relevance, and depth of information.

2 marks Team Collaboration: *Balanced participation and role distribution*.
3 marks Engagement and Delivery: *Confidence, enthusiasm, and audience* 

engagement.

For the peer evaluation;

2 marks Contribution to the team effort: Active and meaningful participation.
3 marks Communication and collaboration: *Effective sharing of ideas and open* 

communication within the team.

2 marks Responsibility and accountability: Fulfillment of assigned tasks and

meeting deadlines.

3 marks Quality of work: Consistency in delivering high-quality work throughout

the project.

Overview of the assessment approaches and weighting

Continuous assessment	Areas of Assessment	Quantity	weighting
A (Theory)	Development of a Project Charter	1	10
	Quiz	3	15
	Case study report	1	25
	PM plan development	1	25
B (Practical)	Case study video presentation	1	5
	PM plan development presentation	1	10
	Peer evaluation (PM plan dev.)	1	10
Total		100	

Pre-requisites: None

# Subject matter

# **Unit I: Introduction to Project and Project Management**

- 1.1 Define a project and identify the importance of initiating a project
- 1.2 Define project management
- 1.3 Identify the difference between the PMBOK 6 and PMBOK 7
- 1.4 Discuss the project management principles
- 1.5 Describe the 10 knowledge areas and 8 performance domains of project management
- 1.6 Understand the process for project management certification.

# Unit II: Eight Performance Domains of Project management

- 2.1. Discuss the eight performance domains of project management
- 2.2. Identify the different performance domains in a project
- 2.3. Understand the tools for project management.

# Unit III: Structuring a project

- 3.1. Recognize and comprehend the key elements of the project management life cycle
- 3.2. Explain the project phases and life cycle
- 3.3. Identify the project phases in projects

# **Unit IV: Project Management Process Groups**

- 4.1. Explain the project management process groups
- 4.2. Identify the project process groups in projects
- 4.3. Map the project process groups into the 8 performance domains
- 4.4. Create charts for the 8 performance domains in relation with the project process groups using

#### project management tools

# **Unit V: Agile Project Management**

- 5.1. Discuss the principles of agile project management
- 5.2. Explain the phases of agile project management
- 5.3. Evaluate the benefits and drawbacks of agile project management
- 5.4. Compare and contrast agile project management with predictive and waterfall project management
- 5.5 Describe a hybrid project management

# **Reading List**

# **Essential Reading**

Horine, G. (2017). Project Management Absolute Beginner's Guide (4th edition). Que Publishing.

Institute, P. M. (2021). A Guide to the Project Management Body of Knowledge (Seventh edition). Project Management Institute.

Kerzner, H. R. (2002). Strategic planning for project management using a project management maturity model. John Wiley & Dons.

Pinto, J. K., & Dearson. (2016). Project management: achieving competitive advantage. Boston: Pearson.

What is Agile Project Management (APM)? | Definition from TechTarget. (n.d.). CIO.

Retrieved 12 April 2023, from <a href="https://www.techtarget.com/searchcio/definition/Agile-project-">https://www.techtarget.com/searchcio/definition/Agile-project-</a>

management

Date: February 2025

#### **EPS101 Introduction to Environmental and Global Economics**

Module Code and Title: EPS101 Introduction to Environmental and Global Economics

**Programme:** Bachelor of Economics and Political Science

Credit Value: 12

Module Tutor: Ugyen Lhendup

### **General Objective**

This module will introduce students to environmental issues and equip them to analyze these issues from an economic and global perspective. This module aims to provide students the relevant theories, methodological tools and evidence to understand pertinent environmental problems. Students then will be able to apply these concepts to evaluate local and global environmental policies and issues.

#### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. Identify the pertinent environmental issues.
- 2. Explain economic concepts and linkages to environmental problems.
- 3. Describe economic concepts related to the environment.
- 4. Discuss the importance of valuation on environmental problems.
- 5. Evaluate different valuation method to measure environmental goods.
- 6. Analyze the repercussions of environment degradation on the economy.
- 7. Evaluate the current policies and identify alternative policies.
- 8. Evaluate environmental policies.

9. Demonstrate and debate challenges related to sustainability issues for economic growth.

# **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours
Lecture		3	60
Contact	Presentation and discussion	on 1 60	
	Self-directed study	1	
Independent study		1.5	60
olday	Peer reviewed	1	
Case study		0.5	
Total		8	120

# **Assessment Approach**

The assessment approach consisted of continues assessment of 60 marks and semester end examination of 40 marks on following approaches:

#### a. Mock Presentation (5%)

Students will be assigned in groups of four to five members to write an assignment. The group assignment will be provided after completion of the teaching of real-world environmental issues. The students will complete an assignment of 800 to 1000 words as a group. The group assignment is intended for peer learning, deep learning, long-term information retention, strengthening communication and teamwork skills, and to examine contemporary environmental issues. Assignment topics will be determined by the module tutor and will assess the student's understanding of environmental problems and its causes and implications. The group assignment will be assessed by module tutor and peers. Peer evaluation fosters consistent evaluation of participation, quality, and quantity of work. The assignment will assess the learning outcomes 1,2,3,5.

#### **Peer Evaluation Criteria**

- 1 mark Participation and engagement: Actively participated in all stages of the assignment. Contributed to group meetings and discussions with valuable input and ideas.
- 2 marks Content quality: Provided well-researched, relevant, and thoughtful content that directly contributed to understanding environmental issues.
- 1 mark Teamwork and collaboration: Worked collaboratively, and helped the team in meaningful discussion.
- 1 mark Report contribution: Contributed to drafting and finalizing the report, ensuring clear and concise communication. Actively assisted with editing and refining the assignment for coherence, grammar, and flow.

#### **Module Tutor Evaluation Criteria**

- 1 mark Structure: The assignment is well-organized with a clear introduction, body, and conclusion. The structure enhances the readability and flow of the work.
- 3 marks Understanding the issues: Demonstrates a comprehensive understanding of the environmental issues and their causes. Provides relevant context and insights that show depth of knowledge on the topic.
- 3 marks Analysis of impact: Provides a thorough analysis of the impact of the environmental issue(s) on various stakeholders, such as communities, economies, and ecosystems. The analysis is insightful and well-supported by evidence.
- 2 marks Substantial use of relevant literature: The assignment makes substantial use of high-quality, relevant literature (e.g., peer-reviewed articles, books, reports) to support arguments and provide evidence.
- 1 mark Grammar and reference: *The assignment is grammatically correct, and references are properly formatted.*

# b. Individual Assignment (15%)

Students will be tasked to critically evaluate different environmental valuation methodologies used and their merits and limitations. The written assignment will cover topics related to the interlinkage between the environment and economics, externalities and valuation of environmental resources. The assignment will be for 1000 to 1500 words. The assignment will be written in three drafts; the first draft to be peer-reviewed, the second and final essay to be assessed based on the following criteria. Learning outcomes 1,2,3,4, and 5 will be assess by this assessment.

#### **Second Draft Criteria**

- 2 marks Introduction, body and content: Clearly define topic and outline the key issues related to environmental valuation. The body presents a well-organized and detailed discussion. The content is informative, accurate, and focused, ensuring that the arguments are supported by evidence and directly related to the topic.
- 2 marks Arguments and informed critic: Demonstrates a deep understanding of various environmental valuation methodologies and their applications. Th arguments are well-supported with evidence and examples. Acknowledges the merits and limitations of different methodologies, offering insightful analysis of how they relate to environmental and economic factors.
- 1 mark Organization: A logical flow, with clear transitions with distinct introduction, body, and conclusion sections.

# **Final Draft Criteria**

- 2 marks Introduction, body and content: Clearly define topic and outline the key issues related to environmental valuation. The body presents a well-organized and detailed discussion. The content is informative, accurate, and focused, ensuring that the arguments are supported by evidence and directly related to the topic.
- 2 marks Arguments and informed critic: Demonstrates a deep understanding of various environmental valuation methodologies and their applications. Th arguments are well-supported with evidence and examples. Acknowledges the merits and limitations of different methodologies, offering insightful analysis of how they relate to environmental and economic factors.
- 1 mark Organization: A logical flow, with clear transitions with distinct introduction, body, and conclusion sections.

#### c. Case Study (25%)

Students will be allocated into groups of four to five members each and assigned a case study relating to environmental policies. They will have to write a case study report of 10 marks and deliver a presentation after conducting the case study of 15 marks. This is to foster the students' ability to work with other students and develop oral presentation skills. This assignment will cover learning outcomes 6,7, and 8.

# **Case Study Report Criteria**

Students will be required to write a report on a case study which will assess their evaluation of different environmental protection measures followed across different countries. The report will focus on the environmental policy of Bhutan and its comparison with other countries' environmental policies. Groups will compare and contrast existing environmental policies and draw a critical analysis. The report will be able to inform the tutor about the student's preparedness for the presentation and knowledge on the environmental policies. Groups will submit reports in three drafts to keep track of their progress. The case study will be assessed based on the following criteria:

2 marks Structure: The report has a clear, well-organized structure with a logical flow of sections (introduction, body, conclusion) and well-defined headings.

2 marks Policy assessment: The report provides a thorough assessment of Bhutan's environmental policies and those of other countries, covering key aspects with proper context.

3 marks Comparative analysis: The report offers a strong comparative analysis, highlighting key differences and similarities between Bhutan's policy and those of other countries, supported by factual evidence.

3 marks Critical analysis: The report offers a critical analysis of the

policies, evaluating their effectiveness, identifying weaknesses, and

discussing broader implications.

#### **Case Study Presentation Criteria**

Oral presentation will be conducted after the completion of the case study report to provide students with better understanding of the related concepts. Each group will make a ten-minute presentation comparing and critiquing environmental protection measures. The presentations will be assessed based on the following criteria:

2 marks. Structure: The presentation is well-structured, with a clear introduction, body, and conclusion. Ideas flow logically, and key points are effectively highlighted.

4 marks Content: The presentation offers a detailed overview of the case study, with a strong comparison and critique of environmental protection measures, supported by accurate and relevant evidence.

4 marks Delivery: The presenters speak clearly, confidently, and at an appropriate pace. They engage the audience with enthusiasm, maintain eye contact, and use effective body language.

2 marks Presentation aids: Visual aids (slides, charts, graphs) are used effectively to enhance the presentation. They are clear, well-designed, and support the key points.

3 marks Question and answer: The group answers questions clearly, showing a Strong understanding of the case study and related concepts.

# d. Class participation (5%)

This mode of assessment is to encourage active participation of the students in their learning journey.

#### **Assessment Criteria**

1 mark Participation: Participate in all group activities

2 marks Contribution: Engage in class discussions as an individual

2 marks Engagement: Listen attentively in the class and compete the tasks given

including assignment

# e. Semester End Examination (40%)

There will be a Semester End Examination (SEE) for a duration of three hours. The exam will cover all topics in the module. More weighting will be given to the last unit on sustainable development.

# Overview of the assessment approaches and weighting

Continuous assessment	Area of assignment	Quantity	Weighting (%)
A (Theory)	a. Peer evaluation-1st draft	1	5
	b. Tutor Evaluation-final draft	1	10
	a. First draft (peer-review)	1	0
	b. Second Draft	1	5
	c. Final Draft	1	10
B (Practical)	a. Case study report	1	10
	b. Presentation of case study report	1	15
	a. Class participation	1	5
C. Semester End Exa	40		
Total			100

Pre-requisites: None

# **Subject Matter**

#### **Unit I: Overview of Environmental Issues**

- 1.1 Nature and causes of emerging global environmental problem
  - 1.1.1 Trends in global temperature change
  - 1.1.2 Vulnerability of climate change
  - 1.1.3 Ozone depletion substance
  - 1.1.4 Human activities and greenhouse gas emission
  - 1.1.5 Emerging water pollution
- 1.2 Economic and social implications of environmental problem

- 1.2.1 Effects of ozone depletion, climate change and air and water pollution on society, environmental and economics
- 1.2.2 Mitigation strategies for air and water pollution, climate change & ozone depletion
  - 1.2.2.1 International agreements on pollution, climate change and ozone depletion
  - 1.2.2.2 International actions to combat pollution: Male Declaration
  - 1.2.2.3 International actions to combat climate change: UNFCC, IPCC, Paris Agreement
  - 1.2.2.4 International actions to combat ozone depletion e.g., Vienna Convention, Montreal Protocol

# Unit II: Interlinkage between the Environment and the Economy

- 2.1 Economics concepts related to environment 2.1.1. Circular Flow of Income
  - 2.1.1 Pareto Optimality
  - 2.1.2 Market failure
  - 2.1.3 Externalities
  - 2.1.4 Public and private ownership of resources
- 2.2 Relationship between the environment and economics
  - 2.2.1 Environment and development trade-off using Production Possibility Frontier (PPF)
  - 2.2.2 Environment Kuznets Curve
  - 2.2.3 Material balance model
  - 2.2.4 Repercussions of environment degradation on the economy
  - 2.2.5 Positive and normative economic analysis
  - 2.2.6 The roots of environmental degradation; industrialization, population growth, urbanization, excessive deforestation, etc.

#### **Unit III: Valuation of Environment Resources**

- 3.1 Importance of valuing the environmental goods
- 3.2 Types of value (use value and non-use value)
- 3.3 Internalizing externalities
  - 3.3.1 Cost-Benefits Analysis (CBA)
  - 3.3.2 Concepts of Willingness to Pay (WTP) and Willingness to Accept (WTA)
  - 3.3.3 WTP and demand curve
  - 3.3.4 Divergence in WTP and WTA for same environmental goods
- 3.4 Tourism taxation as a solution, payment for ecosystem services in Bhutan, and green tax
- 3.5 Approaches/methods to environmental valuation methods
  - 3.5.1 Stated preference methods (Contingent Valuation method (CV)
  - 3.5.2 Discrete Choice Method (DC)
  - 3.5.3 Revealed Preference methods (Hedonic Pricing method, Travel Cost method, Preventive Expenditure Method)
- 3.6 Concepts of environmental/green accounting
  - 3.6.1 Components of Green Accounting
  - 3.6.2 Scale of environmental accounting (global. national and corporate environmental accounting)
- 3.7 Approaches to environmental management
  - 3.7.1 Common and control regulation
  - 3.7.2 Market based regulation
  - 3.7.3 Voluntary regulation
- 3.8 Pollution tax
  - 3.8.1 Pigouvian tax
  - 3.8.2 Benefits and limitation of Pigouvian tax

#### **Unit IV: Environmental Policies**

- 4.1 Environmental policies and regulation of Bhutan
  - 4.1.1 National Environmental Protection Act of Bhutan, 2007

- 4.1.2 Water act of Bhutan 2011
- 4.1.3 Waste Prevention and management act of Bhutan 2009
- 4.1.4 Forest and natural conservation act of Bhutan 2023
- 4.2 The stakeholders involved in formulation and implementation of environmental policy in Bhutan
  - 4.2.1 National Environmental Commission of Bhutan
  - 4.2.2 RSPN, WWF, UN, BTF
- 4.3 Compare and contrast the environmental policies of Bhutan with other countries (case study)
- 4.4 Polluter pay principal policy
- 4.5 Environmental emergencies
- 4.6 Financial Incentives and Charges for Environmental Compliance
- 4.7 Evaluation of environmental policies of Bhutan (case study)

# **Unit V: Sustainable Development**

- 5.1 Concepts of sustainable development
- 5.2 Economic Approach of sustainability
  - 5.2.1 Weak and strong view of sustainability
- 5.3 Ecological Approach of sustainability
- 5.4 Economic perspective on sustainability
- 5.5 Ecological perspective on sustainability
- 5.6 International action to combat environmental problems
  - 5.6.1 The 17 United National Sustainable Development Goals
- 5.7 Applicability of Sustainability in practice
- 5.8 Approaches to address current sustainability issues:
  - 5.8.1 Problem-solving approach vs regional approach

# Reading list

# **Essential Reading**

Kolstad, C.D. (2000) Environmental Economics, Oxford University Press: UK Resources, N. (2012). Environmental Economics. Science, 321(5896), 12–13. Retrieved from http://usir.salford.ac.uk/5586/

Scientific Assessment of Ozone Depletion: Twenty Questions and Answers About the Ozone Layer. https://csl.noaa.gov/assessments/ozone/2018/twentyquestions.

Shogren, J. F., & Taylor, L. O. (2008). On behavioural-environmental economics. Review of Environmental Economics and Policy, 2(1), 26–44. <a href="http://doi.org/10.1093/reep/rem027">http://doi.org/10.1093/reep/rem027</a>

#### **Additional Reading:**

Common, M, (1996) Environmental and Resource Economics: An Introduction (2nd ed.). Longman, 1996.

Costanza, R. & Pattern, B.C. (1995) Ecological Economics, Vol. 15, pp. 193-296. Fisher, A.C. (1981) Resource and Environmental Economics, Cambridge University Press.

Daly, H. E., Farley, J. C. (2006). Ecological Economics: Principles and Applications. Canada: Braille Jymico Incorporated.

Harman. E Daly (2008) Ecological Economics and Sustainable Development, Edward Elgar Publishing.

Date: February 2025

# **DAT101 Statistical Computing I**

Module Code and Title: DAT101 Statistical Computing I

**Programme:** Bachelor of Economics and Political Science,

Bachelor of Digital Communications and Project

Management,

Bachelor of Data Science and Data Analytics

Credit Value: 12

Module Tutors: Karma Dorji, Ugyen Samdrup Tshering, P Paulraj

Module Coordinator: P Paulraj

# **General Objective:**

The module aims to give students a thorough understanding of the basic ideas and methods of statistical computing. In addition to developing their skills in data administration, processing, and interpretation, students will get practical experience utilizing spreadsheets and their functionalities to analyze and visualize data. Students will gain the critical thinking and problem-solving abilities required to pursue further education or careers in statistical analysis by learning how to apply statistical methods to real-world problems through workshop-style instruction, hands-on activities, and independent study.

# **Learning Outcomes:**

On completion of the module, students will be able to:

- 1. elucidate the significance of statistics in resolving practical issues.
- 2. utilize statistical tools for data organization, manipulation, and analysis.
- 3. determine the many forms of data, including qualitative and quantitative.
- 4. manage a spreadsheet package's fundamental statistical functions.
- 5. make a distinction between inferential and descriptive statistics.
- 6. utilize the table tool to arrange and filter data, then use the Pivot Table tool to conduct fundamental statistical analysis such as frequency distribution.
- 7. use the Data Analysis tool to examine both univariate and bivariate data;
- 8. simulate the many probability distribution types, including continuous and discrete probability distributions.
- 9. determine the many forms of sampling methods, including probability sampling and non-probability sampling techniques.
- 10. model different kinds of sampling distributions.
- 11. use charts and graphs to effectively convey the statistical analysis.
- 12. utilize Data analysis Tool to do hypothesis testing and make inferences.
- 13. simulate hypothesis testing using Statistical functions.

#### **Learning and Teaching Approach:**

Туре	Approach	Hours per week	Total credit hours	
Contact	Lecture	2	7.5	
Contact	Laboratory Session	3	75	
Independent	Group Project & Presentation	1	45	
study	Self-Study	2		
	120			

The module will be taught using teaching sessions and practical sessions.

**Teaching methods**: Tutors can use a combination of lectures, labs, and online resources to introduce the concepts and tools of data science. Tutors may also use interactive software such as Orange to demonstrate how to perform data analysis tasks using visual programming.

**Learning tasks**: Tutors can assign students various types of data sets (such as text, images, audio, etc.) and ask them to perform data analysis tasks using Orange or other software tools. Students may be required to present their findings in a report or a presentation. Tutors can also design group projects where students collaborate to solve a real-world data problem using data science techniques.

To teach this module one of the following Open Source tools will be used: Apache OpenOffice Calc/Google Sheet.

These tools do not require much coding and manage to deliver better results than the paid versions like Microsoft Excel, Zoho Sheet, Smartsheet, and so on.

# **Assessment Approach:**

The assessment will be carried out on a continuous basis through the following approaches.

# A. In-Class Activity: (20%)

During the course of the semester, students will complete numerous in-class activities such as group discussions, problem-solving exercises, case studies, and short quizzes. At the end of the in-class activity session, groups may be asked to present their work to the class, or to submit their completed work for grading or evaluation. The activities also provide opportunities for students to collaborate with their peers and receive feedback from their instructor/peers, which can further enhance their learning experience. The final grade will be based on the average of all in-class activity marks, which accounts for 20% of the overall grade of the module.

# B. Individual Assignment: (15%)

Students will have to complete two individual assignments throughout the semester, which in combination will make up 15% of their final grade. The first assignment will concentrate on descriptive statistics, while the second assignment will centre on inferential statistics. Through these assignments, students will have the opportunity to enhance their abilities in data analysis, interpretation, and proficiency in statistical techniques by utilizing spreadsheets. The individual assignment will be assessed on the basis of following criteria:

- Academic Writing and Integrity (10%)
- Statistical Analysis and Reasoning (50%)
- Formal Statistical Reporting (20%)
- Presentation (20%)

Further, each component of the marking criteria will be assessed using the rubrics below:

Criteria	Outstandin	Excellent	Proficient	Developing	Needs	Multiply
	g (6-7.5)	(4.5-6)	(3-4.5)	(1.5-3)	Improvemen t (0-1.5)	ing factor
Academic Writing and Integrity	Demonstrat es accurate academic writing structure, grammar, and vocabulary. Properly paraphrases , avoids plagiarism, and uses appropriate referencing and sources.	Accurate use of vocabulary, syntax, grammar, and spelling with minimal errors. Exceptional paraphrasin g and referencing, with synthesis of appropriate sources.	Minor structural or grammatical errors. Appropriate paraphrasin g and referencing, but lacks synthesis of sources.	Several structural or grammatical errors. Paraphrasin g and referencing require improvement, with some inappropriat e sources.	Poor academic writing structure, numerous errors, and evidence of plagiarism. Referencing is missing or inappropriate.	0.1

Provides Clear Clear Clear Nypothesis statements and notation definitions, and concise of content of content with office are formatting logical workflow, and concise description of results.   Provides Clear Statements attained by relevant statistics.   Presentati Statements and notation definitions and notation definitions and notation definitions are mostly correct. Conclusion statements are well-structured interpretatio ns and supported by relevant statistics.   Presentati on   Present	Statistical Analysis and Reasoning	Correctly selects and justifies statistical tests/metho ds, performs accurate calculations, and makes sound statistical decisions and interpretations.	Test/metho d choice is explicitly stated, correct, and well-justified. All calculations are accurate, and interpretations are consistently correct and well-articulated.	Test/metho d choice is correct but justification may be inaccurate for some questions. Minor calculation errors, but interpretations are mostly accurate.	Test/metho d choice is implied or lacks justification. Some calculation errors, and interpretatio ns are incomplete or partially incorrect.	Incorrect test/method choice. Significant calculation errors, and interpretation s evidence a lack of understandin g.	0.5
relevant content with clear formatting, logical workflow, and concise description of results.  relevant and free of redundancy content or formatting logical, and results are clearly described.  relevant free of irrelevant content or formatting issues.  Workflow is logical, and results are clearly described.  relevant instances of irrelevant content or formatting issues.  Workflow is inconsistent logical, and results are clearly described but may described.  Instances of irrelevant throughout.  Figures, tables, and numbers are workflow is inconsistent lack clarity or detail.  Workflow is illogical, and results are missing or incoherent.	Statistical	clear hypothesis statements, notation definitions, and conclusion statements consistent with interpretatio ns and supported by relevant	Hypothesis statements and notation definitions are consistently correct. Conclusion statements are well-structured and fully supported by relevant	statements and notation definitions are mostly correct. Conclusion statements are consistent but may have minor structural errors or missing	statements and notation definitions are inconsistent or incomplete. Conclusion statements are partially inconsistent or lack supporting	statements are missing or incorrect. Conclusion statements are inconsistent, poorly structured, or lack relevant	0.2
Total		relevant content with clear formatting, logical workflow, and concise description	relevant and free of redundancy. Figures, tables, and numbers are well-formatted. Workflow is logical, and results are clearly	instances of irrelevant content or formatting issues. Workflow is mostly logical, and results are well-described but may lack clarity in some	instances of irrelevant content or formatting issues. Workflow is inconsistent , and results lack clarity	content throughout. Figures, tables, and numbers are poorly formatted. Workflow is illogical, and results are missing or	0.2

C. Practical Test (40%)
Throughout the semester, the student will undertake three individual practical tests, which together account for 40% of the final grade. Practical Test 1 will be conducted for one hour after the completion of the first three units and will contribute 10% to the final grade. Practical Test 2 will also be one hour long, assessing content from the

next two units, and will contribute 10% to the final grade. Practical Test 3 will be conducted at the end of the semester, lasting two hours. This test will cover all the units taught throughout the semester and will contribute 20% towards the final grade

These tasks will provide students with opportunities to acquire skills in collecting, analyzing, and interpreting data and to develop proficiency in using suitable statistical techniques. The evaluation of the practical tests will be conducted based on a rubric that delineates the standards and requirements for each test.

#### D. Group Project (25%)

The students will collaborate in groups of three or four to complete a project that focuses on applying statistical concepts to real-life data. The project will involve formulating statistical questions, designing an analysis plan, selecting appropriate statistical methods, and effectively communicating results. Through this project, students will have the opportunity to improve their data analysis and interpretation skills using relevant statistical techniques with real-world datasets.

The outline of the group project is as given below;

#### 1. Project proposal

As a group, students will be tasked with preparing a project proposal within a word limit of approximately 1000-1500 words. The proposal should include a clear and concise description of the project's relevance and significance, as well as an overview of existing knowledge in the context of the project. Students should identify the knowledge gap they aim to address and outline the expected outcomes of their study. Additionally, they must describe the type of data they will be working with, its characteristics, and how it will support answering the research question. The proposal should also detail the specific aims and methodology of the project, including the computational and statistical approaches to be utilized. Finally, the division of labor must be clearly defined, with tasks assigned among group members, accompanied by a table outlining each member's background and job assignments. The project proposal will be assessed based on the following marking criteria:

- a. Motivation and Background (20%)
- b. Research Question/Hypothesis (20%)
- c. Dataset (15%)
- d. Aims and Methodology (30%)
- e. Division of Labor (15%)

Criteria	Excellent (4)	Proficient (3)	Developing (2)	Needs Improvement (1)
Motivatio n and Backgrou nd	The motivation and background demonstrate exceptional depth, clarity, and critical analysis, highlighting the project's unique contributions.	The motivation and background are well-presented, providing a clear understanding of the project's context and significance.	The motivation and background provide some relevant information but lack depth or clarity.	The motivation and background are not adequately addressed or are missing important information.
Research Question	The research question/hypothesis is exceptionally well-crafted, demonstrating originality, innovation, and a strong alignment with the project's objectives.	The research question/hypothesis is clearly defined, specific, and directly aligns with the project's objectives.	The research question/hypothesis is somewhat clear but lacks specificity or may not align with the project's objectives.	The research question/hypothesis is unclear, vague, or not properly formulated.

Dataset	The dataset chosen is exceptional, providing rich, high-quality data that allows for indepth analysis and meaningful insights.	The dataset selected is appropriate, relevant, and sufficiently comprehensive for addressing the project's objectives.	The chosen dataset is somewhat relevant, but it may have limitations or gaps in terms of data quality or coverage.	The dataset selection is inappropriate, incomplete, or lacks relevance to the project.
Aims and Methodol ogy	The aims and methodology are exceptionally well-developed, demonstrating a comprehensive and innovative approach to achieving the project's objectives.	The aims and methodology are well-defined, clearly articulated, and directly aligned with the project's objectives.	The aims and methodology are somewhat clear but may lack detail or may not fully address the project's objectives.	The aims and methodology are poorly defined, lacking clarity, or not aligned with the project's objectives.
Labor Division	The division of labor is exceptional, demonstrating a strategic allocation of tasks that maximizes each group member's strengths and promotes efficient collaboration.	The division of labor is clearly outlined, assigning specific responsibilities to each group member and demonstrating a fair and effective distribution of tasks.	The division of labor provides a basic outline of tasks, but it may lack specificity or clarity in assigning responsibilities.	The division of labor is not clearly outlined or lacks a logical distribution of tasks among group members.

# 1. Project report

In a group, students will prepare a comprehensive report for their project, ensuring that the following tasks are completed within a word limit of approximately 2000-2500 words. The report should:

- Introduce the research question or problem statement, providing context and background information.
- Describe the research methodology, including the data collection process, any statistical techniques used, and the analysis of the results.
- Present the findings of the research in a clear and concise manner, incorporating tables, charts, or graphs to support the conclusions.
- Discuss the implications of the research, including any limitations or areas for future study.
- Conclude with a summary of the findings and their significance, along with any recommendations based on the research.

The project report will be assessed based on following marking criteria:

- a. Introduction and Overview of Research (10%)
- b. Research Question and Statistical Hypotheses (10%)
- c. Methodology (15%)
- d. Descriptive Statistics (10%)
- e. Statistical Analysis (20%)
- f. Results and Discussions (20%)
- g. Writing Technique (10%)
- h. References (5%)

Criteria	Excellent (4)	Proficient (3)	Developing (2)	Needs Improvement (1)
Introducti on and overview of research	Provides a clear and thorough background and introduction.	Provides a partial or incomplete background and introduction.	Provides a background and introduction that is not related to the project.	Introduction and/or background not provided.
Research question s	States a specific, measurable research question.	States a clear research question but may not be easily or properly measured.	States a vague, untestable research question.	No clear research question posed.
Methodol ogy	Provides a clear explanation of the project's methods including data collection plan and appropriate statistical analysis.	Provides an adequate explanation of project's methods. Some minor deficiencies seen in methods and statistical analysis.	Provides an unorganized or inadequate explanation of experimental methods. Data collection unclear and/or statistical analysis incorrectly applied or not clearly explained.	Explanation of experimental method is missing.
Descripti ve Statistics	Appropriate graphs and summary statistics are used to give a preliminary answer to the research question, effectively summarizing the data and its characteristics.	Adequate presentation with relevant graphs and summary statistics, providing a reasonable understanding of the data and its characteristics.	Partially accurate presentation with some inconsistencies or missing details, utilizing some graphs and summary statistics to address the research question.	Inaccurate or incomplete presentation of descriptive statistics, lacking appropriate graphs and summary statistics to address the research question.
Statistica I Analysis	Thorough and comprehensive statistical analysis, utilizing appropriate tests and procedures, with clear explanations of the analysis methods, highlighting the insights gained and the research question addressed	Adequate statistical analysis, utilizing appropriate tests and procedures, with clear explanations of the analysis methods and their relevance to the research	Partially conducted statistical analysis with some errors or incomplete explanations	Inappropriate statistical tests conducted or tests not conducted/explaine d correctly

Results and Discussi ons	Results and interpretation of data described and presented in final format. Impact of results and external validity are described. Strengths and limitations described. Conclusions support the project results.	Some minor data collection and analysis remains to be completed; strengths, limitations, or external validity not described thoroughly. Conclusion are partially supported by the project results.	Significant data collection and analysis remains to be completed; or statistical analysis, strengths, limitations, or external validity poorly described. Conclusions are not supported by the project results	Results are incomplete or do not match project methods. Data analysis has major flaws. Conclusions are not supported by the analysis.
Writing Techniqu e	Excellent writing technique, showcasing clear and coherent expression, precise organization, and adherence to style and grammar conventions	Good writing technique, demonstrating clarity, coherence, and proper organization	Requires improvements in writing technique, with some sections being unclear or inconsistent	Poor writing technique with numerous style, grammar, and organization issues
Referenc es	Comprehensive and accurate references, incorporating a wide range of relevant and properly cited sources in APA style	Adequate references, including relevant sources and following proper APA citation style	Inadequate references, with some missing or improperly cited sources not in APA style	Missing or incomplete references, not in APA style

# 2. Project presentation

Each group will prepare a 10-15 minutes PowerPoint presentation to effectively communicate their project findings. The presentation should be clear, well-structured, and visually engaging, and it must include:

- Title Slide: Project title, group members, and date.
- Introduction: Research question, significance, and background.
- Methodology: Data collection, research techniques, and analysis methods.
- Findings: Key results with tables, charts, or graphs.
- Discussion: Interpretation, implications, and limitations.
- Conclusion & Recommendations: Summary and future research directions.

Each member should actively participate, ensuring a balanced delivery. Slides should be concise, visually appealing, and not overloaded with text. The presentation will be assessed based on following criteria:

- Delivery (20%)
- Knowledge and Content (20%)
- Analysis and Evaluation (20%)
- Coherence and Organization (15%)
- Quality of Presentation (10%)
- Teamwork (10%)
- Response to questions (5%)

The following rubrics will be used to assess the components of each of the marking criteria mentioned above:

Criteria	Excellent (4)	Proficient (3)	Developing (2)	Needs Improvement (1)
				improvement (1)

Delivery	Clear, audible, and well-timed delivery. Engages effectively with the audience throughout the presentation.	Mostly clear and audible, with occasional lapses in timing or audience engagement.	Generally clear, but may have inconsistencies in audibility, timing, or audience engagement.	Lack of clarity, audibility, appropriate timing, and consistent audience engagement.
Knowled ge and Content	Demonstrates confidence with the subject matter and materials presented. Provides evidence of thorough research. Effectively explains key ideas/issues.	Mostly demonstrates confidence with the subject matter and materials, with minor areas for improvement in confidence or depth of research. Provides sufficient evidence of research. Adequately explains key ideas/issues.	Generally demonstrates confidence with the subject matter and materials but may lack some depth in confidence or research. Provides some evidence of research. Limited explanation of key ideas/issues.	Lacks confidence with the subject matter and materials. Insufficient evidence of research. Struggles to explain key ideas/issues
Analysis and Evaluatio n	Offers a balanced evaluation of information/evidence. Provides detailed analysis of the statistical concepts used in the project, demonstrating critical thinking skills.	Mostly offers a balanced evaluation of information/evidence, with minor areas for improvement in balance or depth of analysis. Provides mostly detailed analysis of the statistical concepts used in the project.	Provides some evaluation of information/evidence but may lack balance or depth. Offers limited analysis of the statistical concepts used in the project.	Lacks balanced evaluation of information/evidenc e. Superficial or limited analysis of the statistical concepts used in the project.
Coherenc e and Organizat ion	Presents a well-structured and logically organized presentation. Transitions between topics or sections are smooth. Provides a clear outline and maintains a consistent flow throughout the presentation.	Mostly presents a well-structured and logically organized presentation, with minor areas for improvement in transitions or flow. Provides an outline and maintains a good flow in most parts of the presentation.	Presents a somewhat organized and coherent presentation but lacks consistency in structure or flow. May struggle with providing a clear outline or maintaining a smooth flow.	Lacks coherence, organization, and effective transitions. Fails to provide an outline or maintain a clear flow.
Quality of Presentat ion	Creates a visually appealing presentation with effective use of visual aids. Demonstrates attention to detail in design, formatting, and organization.	Mostly creates a visually appealing presentation, with minor areas for improvement in design, formatting, or organization. Visual aids are mostly effective.	Creates an acceptable presentation but may lack consistency in design, formatting, or organization. Some room for improvement in the effectiveness of visual aids	Lacks visual appeal, poor design or formatting choices, and ineffective visual aids.

Teamwor k	Presents a cohesive group presentation. Demonstrates effective coordination, collaboration, and integration of individual work into the whole.	Mostly presents a cohesive group presentation, with minor areas for improvement in cohesion, coordination, or integration of individual work	Presents an adequately cohesive group presentation but lacks consistency in cohesion, coordination, or integration of individual work.	Lacks cohesion in the group presentation. Individual work is poorly integrated into the whole.
Respons e to Question s	Provides confident and comprehensive responses to questions, demonstrating a deep understanding of the subject matter. Addresses questions clearly, concisely, and accurately.	Provides adequate responses to questions, with minor areas for improvement in clarity or depth. Mostly addresses questions adequately.	Provides adequate responses to some questions but struggles with others or lacks depth. May lack clarity or fail to fully address the questions.	Provides inadequate or inaccurate responses demonstrating a lack of understanding. Lack of clarity, incompleteness, or failure to address questions appropriately.

# Overview of the assessment approaches and weighting

Areas of assessment	Quantity	Weighting
A. In-Class Activity	2	20%
B. Individual Assignment	2	15%
C. Practical Test	3	40%
D. Group Project	1	25%
Total	100%	

Pre-requisites: Nil

#### **Subject Matter:**

### Unit I: Introduction to Statistics and Spreadsheet Package

- 1 Definition and Scope of Statistics
  - 1.1 Descriptive Statistics vs. Inferential Statistics
  - 1.2 Types of Data: nominal, ordinal, scalar data, qualitative and quantitative data
  - 1.3 Variables: Discrete vs. Continuous variables.
  - 1.4 Data Organization
    - 1.4.1 Frequency Distribution: type and construction of frequency distribution tables
    - 1.4.2 Graphical representation of frequency distribution: Histogram, Frequency Polygon, Cumulative frequency curve or the Ogives
  - 1.5 Sampling Techniques
    - 1.5.1 Probability Sampling and Non-probability Sampling techniques.

#### **Unit II: Analysis of Univariate Data**

- 2.1 Central Tendency
  - 2.1.1 Mean, Median, and Mode and the Relationship between Mean, Median and Mode
  - 2.1.2 Quartiles. Deciles and Percentiles
- 2.2 Dispersion
  - 2.2.1 The Range, Quartile Deviation, and Mean Deviation
  - 2.2.2 Variance and Properties of Variance
  - 2.2.3 Standard Deviation and Application of Standard Deviation
  - 2.2.4 Relationship between the measures of dispersion (Without derivation)

- 2.2.5 Coefficient of variation (Definition and examples).
- 2.2.6 Skewness and Kurtosis (without derivation)

# **Unit III: Analysis of Multivariate Data**

- 3.1 Bivariate data and scatter diagram
- 3.2 Covariance and properties (without derivation)
- 3.3 Simple correlation and properties (without derivation)
- 3.4 Correlation coefficients: Pearson, Kendall, Spearman (without derivation)
- 3.5 Simple Linear regression
- 3.6 Principle of least square and curve fitting (without derivation)
- 3.7 Coefficient of determination and standard error (Definition and examples)

# Unit IV: Theory of Probability & Probability Distributions

- 4.1 Probability concepts
  - 4.1.1 Random experiment, sample space, event
  - 4.1.2 Classical definition, axiomatic definition and relative frequency definition of probability
  - 4.1.3 Concept of probability measure
  - 4.1.4 Addition and multiplication theorem (limited to three events with proof)
  - 4.1.5 Conditional probability and Bayes Theorem-numerical problems (without proof)
- 4.2 Random Variables
  - 4.2.1 Definition- probability distribution of a random variable
  - 4.2.2 Probability mass function and their properties (without derivation)
  - 4.2.3 Probability density function and (cumulative) distribution function and their properties (without derivation)
- 4.3 Discrete probability distributions (without proof)
  - 4.3.1 Bernoulli
  - 4.3.2 Binomial distribution
  - 4.3.3 Poisson distribution
- 4.4 Continuous probability distributions (without proof)
  - 4.4.1 Uniform distributions
  - 4.4.2 Exponential
  - 4.4.3 Normal distributions.

#### **Unit V: Sampling Distributions**

- 5.1 The rationale for sampling
- 5.2 Sample and Population
- 5.3 Statistics and parameter
- 5.4 Sampling distributions (without proof)
  - 5.4.1 Sampling distributions of the mean
  - 5.4.2 Sample variance from a normal population

#### **Unit VI: Hypothesis Testing**

- 6.1 The rationale for hypothesis testing
- 6.2 General procedure for hypothesis testing
- 6.3 The null and alternative hypothesis
- 6.4 One-tailed and Two-tailed tests
- 6.5 Errors in hypothesis testing
- 6.6 Critical Region
- 6.7 Level of Significance of a test
- 6.8 Confidence intervals and the margin of error
- 6.9 Parametric test (without derivation)
  - 6.9.1 One sample t-test
  - 6.9.2 Paired t-test

- 6.9.3 Two independent sample t-test
- 6.9.4 Fisher's exact test
- 6.9.5 F-test
- 6.10 Non-parametric test (without derivation)
  - 6.10.1 Chi-square goodness of fit test
  - 6.10.2Chi-square test

### **Laboratory Sessions:**

#### 1. Unit I Lab Sessions:

- Lab 1: Statistical Functions in Spreadsheet Package
- Lab 2: Different types of frequency distribution table in Spreadsheet Package
- Lab 3: Charts and graphs in Spreadsheet Package

#### 2. Unit II Lab Sessions:

- Lab 4: Calculation of various measures for a given set of data using Spreadsheet Package
- Lab 5: Data manipulation in Spreadsheet Package

#### 3. Unit III Lab Sessions:

- Lab 6: Correlations using Spreadsheet Package
- Lab 7: Regression and multiple regression in Spreadsheet Package

#### 4. Unit IV Lab Sessions:

- Lab 8: Calculation of Expectation of random variables in Spreadsheet Package
- Lab 9: Discrete & Continuous Probability Distribution using Spreadsheet Package

#### 5. Unit V Lab Sessions:

- Lab 10: Defining variables and data entry in Spreadsheet Package
- Lab 11: Sample and Sample size calculation in Spreadsheet Package
- Lab 12: Calculation of standard error and confidence interval in Spreadsheet Package

#### 6. Unit VI Lab Sessions:

- Lab 13: Hypothesis testing using Spreadsheet Package
- Lab 14: Comparison of means and interpretation of P-values using Spreadsheet Package

#### Reading List:

#### **Essential Reading:**

- Lock, R. H., Lock, P. F., Morgan, K. L., Lock, E. F., & Lock, D. F. (2020b). *Statistics: Unlocking the Power of Data*. John Wiley & Sons.
- Levin, J., Fox, J. A., & Forde, D. (2016). *Elementary Statistics in Social Research, Updated Edition*. Pearson.
- Sullivan, M. (2022c). Fundamentals of Statistics: Informed Decisions Using Data (6th ed.). Pearson.
- Triola, M. F. (2018). Elementary statistics using Microsoft Excel (6th ed.). Pearson.

#### Additional Reading:

- Linneman, T. J. (2017). Social Statistics: Managing Data, Conducting Analyses, Presenting Results. Taylor and Francis Group.
- Miller, I., & Miller, M. (2018). *John E. Freund's Mathematical Statistics with Applications*. Boston: Pearson.

Walpole, R. E., Myers, R. H., Myers, S. L., & Ye, K. (2016b). Probability and Statistics for Engineers and Scientists. New Delhi: Pearson Education.

Date: February, 2025.

### LAC101 ह्टायानेयार्थेव तही इत्या

LAC101 ह्टायानेयार्थेव तही हता 

ঝঝ্মইঅ र्टाजातर्ज्ञेरार्ट् होर्टार्ट्वाक्वरार्ट्वा क्षराञ्च मुक्तात्र्वेचार्ट्याच्यात्र्वाचार्यात्र्वाचार्यात्र्वाचार्

वाबबाः भून 'क्ब 'र्सवा'न्ट'न्डी'न्डीन 'वाबबा भून 'क्ब 'र्सवा

Par Carl

**कूट.पिटु.जुबोबा.यधेट**ती ब्रॅम् क्व क्र्य क्र्य या नेषार्या है अर्घे रेवा श्रेंचा चा केवा श्री ब्रुंट ळंब तर्गे तर्देव या

খ্রীসাবদদাথকার্শ্বরা

ब्रूँट.क्ष्यं.पर्ट.तीब.ब्रूँट.सीब.बी.क्रेंट.ती. क्रूंट.परपु.तम.ब्रॅट.पर्प.चेब.ल्यू.पट्ट.। द्या.झ्य.क्र्य.क्रं.प्राचेत.क्षे. टे.क्श.तव्रुय.टे.लवा.लुब.पडवा.क्वा.वब. विवट.क्षेय.क्री.बट.ती. क्र्याव्यक्ष.यस्य.के. ह्येया:ह्येट्-(ब्-र्क्स्याय:प्रते:ट्रियाय:यान्ट-(प्रक्लेट्-(अत्रा

#### श्रृंयःश्रृंदःश्रृंदःश्रृंदायः

ब्रैंट.क्ष्य.पट्ट.शहवा.चर्जम.ट.श्रृंच.सेवा.क्र्.ग्रंथा

- ७. मूट्रावर्रः अप्राची विद्यातिष्यात्रः अप्राची अप्राची त्रिया स्वाची विद्यात्र
- २ अट. पट्टेब. टट. मैंच. हेब. चर्ग्रट. घटका र्थं. जब. अवावा नट. प्रविच. ही. र्थ्वा वा
  - ४. हेब.पटिव.व.वे.शै.टार्ट्रे क्वा क्र्या अक्शवा टार्ट्र अक्शवा ट्रं अक्शवा टार्ट्र अक्शवा ट्रं है.ही.क्वावा
- ८. श्रेट.क्र्यं.यर्ड्ट.तं.टंट.विट.क्र्यं.क्र्यं.क्र्यं.वंत्रं.श्रेयं.वंटटं.क्र्यंत्रा
- ५. धे.चीपु.ह्र्य.टा.क्.य.पह्ता.ट्य.ट्य.क्वाया
- ८. धेवा त्वाया वार्ट्र तो अर् रहा होते विहास विह्या स्वाया
- अ• क्र्टावपु.कृ.श्रृंश.चर्श्ववाया.बु.रट्य.बार्ट्य.वार्ष्य.मैच.क्वाया

#### श्रॅ्याश्रॅ्टार्ट्स् श्रॅ्याश्रॅ्वाचित्रायया

<u> নৃষ্ট্র'ব্য</u>	হলম'শেষা	न्तृत्रः ख्र्या यां क्र्या त्र स्क्रः क्रॅन्	ब्रैट-प्रधियाम् क्रिं
<b>८५%</b>	ব্যধন,শ্ৰম্ব ব্লিম্ব-দেশন	3	(10
' '	ब्रूंच.प्रट.ब्रूंट.जी ब्र्य.र्डर	3	
<b>र</b> म्डॅुंस्	गो.प्रेन.प्र. झेबो.प्रेन. झेबो.चुी जान.पर्याल. हो.चुी	6	(vo
ब्रूट्ट-स्व-वर्देव-स्व-सुव-सु	<i>12</i> 0		

#### र्म्युःबे्यः वयसः यस

प्या.मी.क्ट.मीषु.क्. जना.मुब.पचटा.झे. श्रेमाया.मुब.यु.शुरी

स्र्यात्यम् क्यात्यस्य ५०० वया ५०० ग्रायम् अत्यत्यक्षे इस्राह्यम् क्याह्यम् क्याह्यम् स्राह्यस्य स्याध्यस्य स्य तद्भुत्तम् त्याद्वयस्य पाठ्यात्यात्यत्यि स्वयाक्षे हो न्यून्यस्य स्याह्यस्य स्याह्यस्यस्य स्याह्यस्य स्याह्यस्य स्याह्यस्य स्याह्यस्य स्याह्यस्य स्यावस्यस्यस्यस्य स्यावस्यस् विट्याक्षं त्यन्ते ता मेन हो त्या हुआ वही बट्त अन् अन् स्वा द्वा त्या स्वा त्या स्व विट त्या हो ते त्या हो विच क्र-विश्वतात्वरात्त्वर हो हो हो हो स्वराधात्वर क्रायि हो स्वराधात्वर हो स्वराधा हो स्वराधा हो स्वराधा हो स्वराध वी.पर्शिट.पिट्य.राजेट.क्वाया अर्थ.लावा.क्व.राज्य.राजु.याया

#### বৃধ্য-ছ্ব-ট্রি-ট্র্যুদ্য শ্রীবা भ्रापाया ग्रीकं पावी (५%)

ट. तांगुवा चेत्रा क्ट्रंट क्ट्रियोत्र ब्रीटा क्री. व	क्षित्राचीक्षरःव्यवःच्यन्यःच (द%)	भ्रम्-ध्येयाच्याख्यस्यःयानुगयाः (७%)	হ্ <sub>ব</sub> -অর্ক্তমন্ম ( <i>g</i> %)	केंपा पी पार्केट्र अर्क्कअषा (७%)
(अर्क्ष्याश्चर्य)	हुब.ता( <b>४)</b> भ्रम् तृग्वा.चु.भूम.जब.यथेस.त. <b>ड</b> .हस.	.विधियतःलूट्-तो (३) श्रद्भःतुवी,ट्टः उद्युज, वोषट् क्री.कृत्वी,क्र.से.अक्र्वो.क्रीट्रांबिट्य	(1) (2) AL AL MELA MELAL MELA MELAL M	
(=0)	अन् धिवा वो अँस व्यव प्रमृत्यास्य प्रमृत्यास्य (१)	च (०°७) भ्रेट् लुवा.स्ट.जचुन.वायेट् ग्री.लुवा.क.स.धित्य.वायिवाय.स	र्नेत्र अर्ळक्षण स्वाञ्चे परुत् हो व्यक्ता स्वाज्य । (०.२)	क्रॅम् मी मुर्केट् 'अर्क्षअष' स्टा श्चे 'चरूट् 'ट्रे' प्रॅट् ' च (०.४)
(agr <sub>1</sub> )	भ्रत्योगी मुक्तरायम् । भ्रत्योगी मुक्तरायम् ।	इंटा(॰ॱस) भ्रेट लुवा-टि- जड़्ना वायट ग्रि.लुवा-क.से.विस्य वायिवायार	र्म्, अक्ष्मका प्रमुट हो	ह्मां (०.५) इता.वी.वार्ड्स् अवस्थरा यहीतः श्चे पञ्च र हे प्र
(a)	• <b>.ત)</b> અન્ જીવા વી ૠૂંમ ત્વલ પ્રતિ પ્રકાસ (	.જ્ઞાં(૦٠૩) ૠંત્રાંતા-૯ઝનુંત્રા.તોથન ગું.જી.જીવા.જ્વ.લી.ઉત્ત્યા તોર્યવાતા સ	र्म( <b>०.</b> २)	દા(૦-૪) કૂતાંતુાં તોકૂર્ટ. अक्ष्मयः घ.झ.झ. તજર્ટ. ટું. ભૂર્ટ.

च चेब.क्टं.ग्री.क्ट्र्बिबाब.बी	भुगान ग्रे कर् गानी (४०%)			
ग्री:बट:याक्रवा नेब:क्ट्र-क्व्रियावाम्य	क्षत्त्विद्वायन् मत्या (८%)	मुदाहेदायचर्मा (५%)	(८%) (८%)	पहिंद्-अर्क्षअपा (८%)
(এক্টবা স্থ্রুন্)	વદ્રેય ક્લું વદ્દન વાત્રે ભાગ મુન્ય કુત્ર કુત્ર કુત્ર કુત્ર ક્લું વદ્દન વાર્ષ હોય તે હોય વિલ્	यो.स.स्वयानञ्च त्यांपि.श्वया (८) - - देवानुत्वाचीःश्वयः हेवायत्वाचाः	.लट.बो.स.ब्रबीराज्ञै सभूरीचेवी (८) क्रिकान्नियाज्ञीर्स्व क्ष्यान्तियाज्ञेस	(८) क्षेत्र,अधेत्र,ज्ञ,नुस्य,थेवा। ट्रेय,अक्ष्मयाक्ष्, यह्र्ट,अक्ष्मयाक्ष,
(20)	(॰) यद्-तक्कैट्-ट्-तक्केट्-तपु-लेट-पट्चे-बिक्वा-पहूल-प्रे-सुन्-थेबा बर्ट-प्रकेट्-ट्-क्किट्-तपु-लेट-पट्चे-बिक्वा-पहूल-प्रे-सुन-थेबा	(८) डुचो-अ-सूची-दायो टिन-ट्रिन-क्री-ब्रेच-हेच-रिनट्य-व	थेवा (४) जट.पट्चे.बाडुवा.प्य.पटाट.श्रुट्ट.हो.टगूर्ट. इक्ष.होय.ग्री.ट्रेच.क्ये.ट्ट.पहुजन्म.ट्	(४) प्रह्मियान्यः अस्त्रम्या प्रह्मियान्यः अस्यम्यान्यः अद्यः अस्यम्यान्यः
(ABE1)	તર્-તર્જી-L-L-તર્જી-તાલુ-લેન્-લઇવ-તોલુબ-લદ્દન-દે-દ્યુનથી (૧) કર્-પ્રા-L-:ક્રુવા શ્રી-તાલુ-લેન્-લઇવી	.अ.लूबी.तथा (४) -पं.प्रेय.क्वेय.धेष.पयर्.घटळा.बोवुळ	बेबी (४) जट पड़ेब.बोव्य.प्याप्यच्य.श्रुट्य.ब्रे.चगूट. क्र्य.त्रुय.ग्री.ट्र्य.क्ष्य.पटा.श्रुच्य.स्ट.	अधिय.मृं, सुब्द.पटिया। (४) ट्र्य.प्रकूशता ट्राइट.अक्स्याया क्र्या.प्रक्स्याया

(≅)	(૧) યદ્મ-યક્રિટ્-ર્ય-પ્રક્રીદ્-પ્રતુ: હોન્દ-તદુર્ય-યશ્ચિત્ર-વર્દ્ધલ-છે. દ્યુંત્ર-સુવા વર્ષ-પ્રક્રિ-પ્રદ-ક્રિવા ક્ર્રીય-ક્રીય-તદુર્યા	थियः प्रे.ह्याः यः स्वाः तथा (४) राज्ञः प्रे.ह्याः यः स्वाः तथा (४)	જુયા (၇) લુદ્દઃ લદ્દેત્ર નાયુઝા લૅત્રઃ લવવા એન્દ્રા સ્ટ્રોન્વર્ગન્ -	ळेंचा' व्यळकाया पहॅंप' व्यळकाया ऍव' व्यळकाया कुं
				ट्या (१) च्या (१)

वा रिवाक्रिय रेडि धुनाविकाती क्रियावपुरत्वा विभिन्न रितावपुर विद्यान्तर विद्यान क्रियावर विद्यान विद्यान विद्यान

श्चिमकाग्री:कॅट्रामिबी (१०%)

जय-ब्र्-जुर्गाया, भूय-ब्रि-ब्रि-ए-पटन-ट्र- भैगोय, ब्रिय-ब्रि-अस्त्री अस्त क्ष्य-वट- स्ट्र-य-ट्र-यश्चिय-प्रे-भौगोय, ब्रिय-ब्र-अग्य-स्ट्र-यश्च-अस्त्री अस्त स्ट्र-यहेन स्थाया स्ट्र-यहेन स्ट्र-यहेन स्थाया स्ट्र-यहेन स्ट्र-यहेन स्ट्र-यहेन स्ट्र-यहेन स्थाया स्ट्र-यहेन स्

### टः रुषःकुतः द्वे वेदाः दवे द्वाः इतः इतः द्वे द्वः द्वः द्वः प्रायुक्षः इतः पाववाः वो विषाः वे विष्यः विष्यः व

श्रीयायाग्री:क्	भ्रुपाय ग्रें कंट् पांदी (१०%)								
ग्री-ब्रियोश. ग्री-ब्रियोश. चेत्र-क्ट्र	बेब बेब दिया प्राची (१०%)					श्रम्यः नृष्ठन् नृष्ठे विषा			
वायका टाक्नी वटा कुर्वायः स्री प्रमायः स्ट्रिट्	ই্ব'ৰ্চ্চৰ্'ষ্ট্ৰ'ব্দ'ৰ্ন্বৰা (ৰু%)	धेषार्श्वेतः दर्धः याञ्चेष (४%)	तिस्यः वर्षियां क्षेत्रा विस्यः वर्षियः क्षेत्रा विस्यः वर्षियः क्षेत्रा	ষ্ট্রব'নেডম'ক্লীশা (ব%)		র্ব্ব ক্রব্ শ্রী বন ব্রবা (4%)	इंदा (३%)	क्षित्रक विश्व क्षात्रक्ष्यः विश्व (द%)	धुत्र.ख.स्यन् सम्या धुत्र.ख.स्यन् सम्या
<sup> 최소</sup> 기	र्देश क्षेत्र प्रश्नियम् क्ष्म प्रश्नित्र विश्वप्रम् वा स्टिस् प्रश्नित्र प्रम्भे त प्रभा (४)	(य) मुन्तुयः स्प्रेन्या स्थान्यः स्रोन्यः स्थान्यः स्रोन्यः स्यान्यः स्थान्यः	(४) एयट्-ट्रिश्च हुवा क्र.यषु पञ्चना हुवा ब्रिट्य चिट्च गुच्चे	.ली (४) ४.क्षितीकूपे.जचाजुर इय ह्या शिर्मे.श्रेच.		र्त्व : क्वंच : प्रतः विश्वः हे क्रान्ट्रेंच : प्रति : च्वंच : च्वंच पाः के : खुन् : खुव : चः खे : व पुणा (४)	(4) (4) (4) (4) (5) (4) (4) (4) (4) (4) (4) (4) (5) (4) (4) (4) (5) (6) (6) (7) (7) (8) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9	ट.ट्रं.हुब.बेबी (४) १.ट्रं.हुब.बेबी (४) इ.चबु.पङ्का.बुटा.पच बिट्य.बेथि.कुंग्रेजूबी.	.ती (४) स्रुक्षीयस्त्रित्यान्त्रय स्रुक्षीयस्त्रित्यान्त्रय स्रुक्षीयस्त्रित्य

(20)	देवी (४) च.एट्र.स्य.क्वे.यजूर. च.एट्र.स्य.क्वे.यजूर.	हुषःश्वती (४) वाङ्ग्यःश्वती (४) लवाङ्ग्यःश्वति	(२.५) श्रुचा द्वतःत्यत्यः पुःचुत्रः च.कः वविशः पञ्चनः षिच्यः वविशः वञ्चनः	थ.ती (२.त) भ्र.श्राय.कथ.लवी.स चुर्य.हुबी पंस्तर.विचेता.हूंच्. पंस्तर.विचेता.हूंच्.	द्वाक्ष्यःम्स्यवियाने ज्वस्यं च्याच्चे प्याम्सः ज्वस्यं च्याच्चे प्याम्सः ज्वा	वा(४) व.पड्डा, चे.चुय.थे इट.क्डा, बांचुया.ट.कु	) यट्-ट्रे-हुब-ब्रेबी(२-५ इ.बर्बिश-पञ्चन,चुट-ए षट्-ब-बर्विश-पञ्चन,चुट-ए	थे.ती (२०९) भ्रे.श्रव् क्यालयील चुर्च तुंथा पर्सर प्रचानिया क्रूंच
(agr	. सुब. प्यट्टिया (१) च. प्यट्टिया (१)	ध्या क्षेत्र-प्तर-ध्ये या क्षेत्र-क्षु-पत्ते दे उत्पादहँ या ते ही	श्वेची (२) धृतःपत्तर्यः पुंच्यः चोक्ष्यःपञ्च्यः चित्त्यः चीचेवायः क्रुकाः	पह्मत्रःश्चाः (१) अक्षःक्षयःयान्येत्वः पह्मयःश्वेदःअःग्वेहवाः वस्त्रःग्वेचनयःश्वेतः	र्द्र्व स्व स्ट्रियाने व्य स्व	्रवह्त्यः हेःचेत्रः द्वुवा व्यह्त्यः हेःचेत्रः दुवा व्यह्त्यः हेःचेत्रः दुवा	यर्-प्रे-ह्मय-स्या (१) इ.चानुष्य-त्रञ्चन-विदा-त वित्य-चित्त्वन-कुण्या	प्रचयःश्चःस्य (१) श्रमः क्षयः जवाः त्यं यः प्रस्यः मेटशः चाङ्गाः प्रचरः चिचाशः श्रूषः
(E)	र्ट्रव्हर्क्य, द्रस्य स्विक्सः र व्रस्ट्रव्हर्ग्य, यद्ग्या व्राच्या, श्रेव, यद्ग्या (०.५)	धना क्रुंच-प्र-धि मा ह्येन (ह्या क्रुंच क्रिंग (ह्या क्रुंच मा ह्या क्रुंच मा ह्या क्रुंच मा ह्या क्रुंच मा ह्या क्रिंच मा ह्या क्रुंच मा ह्	.ह्मस्य.श्रेची (०.५) पञ्चतांश्चरात्यर्टर्ट्ट चा.क.चोड्चांस्,ड्डची विष्यः,चित्रवांस्,ड्डची	(०.५) श्रेष्ठ-(७.४८८-१४)-ती ति.श्लेष्ठ-श्लेष्ट-(४८८-१४)- श्लेष-१४८-१८-१८-१८-१८-१८-१८-१८-१८-१८-१८-१८-१८-१८	र्द्द्र-ळब-द्द-तिस्वसः र ब्द-द्द्र-तिदे-द्द्र-तिस्वसः वान्यत्र-ज्ञेत्र-तिद्वा (०.५)	(०.५) उद्धाः कुं चेषाः द्वेषा इतः कुं चेषाः ने क्ष	थेता(०.५) ज.पुट्य.पट्ट.ट्रे.हुब. १८.पट्टा.ट्रे.हुब.पट्ट.	(०.५) श्रेष्ठ.खे.प्यट्ट.श्रु.खो प्य.श्रेष्ठ.ह्यांत्यथा श्रु.लट्ट.श्रेट.तर. श्रेष्ठ.खेर्य.थो

श्रम् (बै.स्ट.च्र्य.क्र्र्स्) तुः तम्यान्त्रम् स्वाक्षित्रम् स्वाक्षित्रम् स्वाक्षित्रम् स्वाक्षित्रम् स्वाक्षित्रम् स्वाक्ष्यम् तिः स्वाक्षित्रम् स्वावक्षित्रम् स्वावक्षित्रम् स्वाक्षित्रम् स्वावक्षित्रम् स्वावक्षित्रम्

चेब.क्र्ट्र.ग्री.क्रूबोब.बीटा	भुगवाग्रीकंत्यवी (२०%)			
चेट.तांजुबा स्व.क्ट्रेंब्यांब.बीट.ग्री.	श्चेषाचर्गान् (७०%)	गुन्न ब्रुपन दर्भन देश (६%)	क्षटःक्र्याः सः श्रद्भदः द्रह्मद्रियाः व्ययाः वेजा (८%)	aষ্ট্র ফাঁন্( <b>ব্%)</b>

(बर्केषा शुरु।)	. ह्मेब्र-ब्रुमा (१०) म्रोना-प्रॉप्ट ग्रे.खि-्राक्टब्राब्र-व्यक्त-व्यक्	थ.पड्स.तम्स्वय.येवी (८) वीय.प्रियाम्चे पड्स्य.युव्यस्य लुवा.पचित्रम्भे पड्स्यम्यस्य	पर्श्ववायः घटयः भ्र्ः, अक्रूवाः में .बीटः तः मृत्येत्वयः चेवा। (८) ट्रेशः क्षत्रं .टटः पर्विनः चपुः श्रुटः क्षवाः नटः अन्तः लुवां वा क्षूत्वाः वार्षुः .	मुळा-सेची (४) पद्मा-ट्याप्ट-क्रिय-क्र्य-म्-ट-,स्त्य-म्न- ट्र्य-अक्ष्यया-क्र्य-अक्ष्यया  क्र्या-अक्ष्य  यष्ट्र-ट-अक्ष्यया  स्चा-वीपु-वालय-वाल्य-क्री-पद्म-अक्ष्यया  स्चा-वीपु-विट-विश्यया
(**\)	ક્રિયાસુયા (એ) - દ્રીયાસુયા (એ)	पहूला हे हुया थे वी (४) ब्रिया बेटाया हुी पहेंचा हुया.	चर्ड्यः घटषा क्षः यत्। (४) म्ह्र्यः घटषा क्षः यत्। (४)	(૧٠૫) વાકુતા.ધ્યા.તન.શ્વિધ.કૃતા.કૃતા.વા વાકુતા.કૃતા.તન.શતિ.કૃતા.કૃતા.કૃતા.વા
(aĝrj)	(ग) ह्य. पे. झुब. श्रेबी श्रुब. त्यूर्य. कुब. खे. कुब. व्यंत्रेश टे. हुब्ब. व	पहूज, में , सुबा श्वेषा (४) बोबा, बिटाब, ग्री, पहूच, सुश, बोचेब, में, हुवा,	र्श्वयायः घट्यः व्होटः न्ह्या (४) ट्रियं क्ष्यः र्यटः प्रह्मियः यप्तः क्षयः क्ष्याः द्र्यः भ्रतः ध्येषाः क्ष्याः याद्वे य	. थे.बी. (२) बाबुका ट्रा.कुवा क्षिया अधिय अपरा ह्रा.ह्युय एड्रा.कपूर्य, क्रि.व्यूचा ह्यु स्टरा ह्यु
(g)	(4) ह्या.पे.झिय.श्रेया। श्रेया.त्यांस्य.श्रेष्य	નું.કુતાં વદ્ભાકું.સુત્રાનું વાયુક્ષા વું.કુતાં વદ્ભાકું સુત્રાનું સુત્રાનું વાયુક્ષા	चर्ड्न, घट्या क्षे.घ.घो (१) चर्ड्न, घट्या क्षे.घ.घो (१)	ટ્ટેયા.વેતી(••ત) વધુ.પું.કુતી.તદ્યું.લેપ.ત્ય.ત્રજ્વેચ.ક્યું. વદ્યું.ત્યૂં.તે.કુતા.હ્યું.ક્યું.ક્યું.સ્ય

क्ट रिया क्रियों यो. त्या हुन्दा देवाया क्रवाया भूद क्रिया वाष्ट्र या वाष्ट्र वा क्रिया क्रिय

https://www.dzongkha.gov.bt/dz/tools ब्रन्तुः "ह्नायः सहतः यवूर्वः क्षूत्रः देवः त्याव्यावाः" बेनः क्षेत्रः त्याव्यावाः" बेनः क्षेत्रः त्याव्यावाः अहतः यवूर्वः क्षुवः त्याव्यावाः अहतः यवूर्वः क्ष्यः त्या

ल्लि. ग्रुका ह्रत्यावपु अह्तावाषु वे अतिक्तान स्वाप्त स्वाप्त स्वाप्त विवास स्वाप्त स्वाप्त स्वाप्त स्वाप्त स्व ह्रितावपु भ्राप्त विवास स्वाप्त स्वाप

<i>ব্</i> লাক্ত্র্নান্ত্র্য	**************************************		
	एड्र-क्ष्मेक्षा (८) भूत्राञ्चनात्रम् ह्र्याचपुः क्षेत्राचाच्याच्याच्याच्याच्याच्याच्याच्याच्याच	ह्नायपुः हे श्रुभाग्यह्नेतः बच्यः मेयः स्ता श्रुमान्त्रमान्त्रम् विषयः विषयः विषयः स्वा	५थः श्चितां पटान्त्रम् त्योः रहेताया (८) इन्तायः क्षात्रायां त्रीयः योद्धन् अष्ट्यययः
नेबाक्ट्र हिंगा मुद्रा ग्री वट ग्रोबेबा			

	पद्मे.क्ष्रीया.थ्री (ए) भ्रूची.द्रची.बट. ब्रूट.चित्रु.कृची.चित्रचयात्र.चे.	डूट. विषु. मुं. बूँग. वर्ष्ट्रेप. घटथ. चेथ. थु। (ч) बूबो. दुबो. दट. पंबील. पंसुब. बट. जे.	दुष्टा श्रुपा,पटाटी, पट्टी,ष्ट्र्योया.थ्रो(०) इटापा,प्रायीपु,ग्रीपा,पाकूटी,श्रष्ट्रथया.
(अर्क्रेय् गुरू)	म्र्या, द्या, बट. क्र्टा, विद, लुवा, वाञ्चेवाथ, टार्थ्ववाथ, हे.	म्रॅंग, द्या, दट. पदीज, पद्मेय, यट. जे.	<u>इ</u> ट.प
	કુ વ્યક્ષ વિદ્વા સાંગ્રે (૯)	हॅट्यायते हे ब्रुका बटा फुलका पहुता नेवा हो।	देश श्चेषा तयम् में ५ ५ तथा तही ह्याया हो <b>(</b> 4)
(===)			
	क्ष.ब्र.पट्टी.ब्र्वोवरज्ञी (४) मूचा.द्रवा.बर्ट. हूट.विष्टु.लुवा.वश्चिवावर.चर्श्ववावर.हे.	मूर्यः तुर्वः भूकः वटः अन्तः द्वः देनः वेषः म्री(२)	કુજા.શુત્રીત!તયદે.દે. ભા.કુ.કુ.પટી.ધ્રેતોબા.છો(ડ) દૂદ.પત.ભુ.ચીંવુ.ચીંગત્તીકૂદે.જાજ્ઞજા
(ਕਬੇਵ <sub>ੀ</sub> )			
	एडी.श.क्रीबंधा.थां (४) मूचा.ड्रवा.बंट. हूंट.(वपु.लुवा.व)डीवाश.चर्श्ववाश.हे.	म्नूयां देवां प्रस्कृतः वदः चर्छतः अनेवः श्रो (१)	. इ.श.मृत्रीतापटाटी, पद्मीकाञ्चरीवाज्ञी(२) मृत्याप्तानीतुरमुक्तावाज्ञीयाचीतुर्
(g)			

### 

२४.क्रै४.८ड़े.बुटा	<u> ন্ট্র- ন্ট্র- ন্</u>	ग्रीट्य,।य	भ्रेत्रायःग्री:तक्षि.क्ष
य (यहलायम्)	ग ब्रैंच'वट'ळूब'कुवब	1	२९
	प्र श्रेष.पर्यका	3	२०
	य अहंच यहें	1	<i>1</i> 4
प <b>(</b> ब्रैंट.जॅ <b>)</b>	ट. लग्न.पंग्रीजा	२	લ્પ
क्रांच्या क्रिया		700	

### $\frac{2}{3}$ $\frac{1}{3}$ $\frac{1}$

# लबाक्य.रटाचा अर्थालवाची वश्चरायवा ब्रिटाक्य.ग्री.वरार्ट्या

- १.१ भूरः धेवा वी वी र्वे र्हेबा
- 7-7 #5-647-5-10-#5-3-19-5-4-1
- $\text{$\lambda$-$4$ $$ $$ $$ $\lambda$-$4$ $$ $\lambda$-$4$ $$ $\lambda$-$4$ $$ $\lambda$-$4$ $$ $\lambda$-$4$ $$ $$ $\lambda$-$4$ $$\lambda$-$4$ $$ $\lambda$-$4$ $$
- २.६ ह्र्ट.विष्यु.श्रेट्र.लुवी.वी.पर्वेट्र.य्यव्य.यब्रेवा
- २.५ ह्टाव.५८.लुव.ह्व.जि.५३.छुन
- १.५ भैट.लुबा.ईच.ट्ब्र्.चयु.सूर्

# क्षय.क्ष्य. बोबुकाती क्षटःवर्षेयं दिनःक्षेयःक्षेयःवर्धाः वर्षाः वर्षाः क्षितः क्षितः क्षितः क्षितः क्षेत्रः क्षेत्रः क्षेत्रः वर्षाः

- ४.७ अट.पट्टेबी
- २.१.१ वर्गराष्ट्रीखरायदेवःवरम
- २.१.२ ळ्वा श्चिर ग्री खेट तर्डे व घटवा
- ८.१.४ ट्.मिट.क्वैय.पड्रेज.जेट.पट्रेयी
- ४.७.५ वर्क्नेट.राषु.जेट.षट्रेब.घट्या
- २.१.५ नम् नकुन् खर् तहेव न्यात्रेय नति खर् तहेव तन् वस्य

#### १.१ कुण हेवा

### जबाक्ष्य. वश्चित्रात्रा मृत्यावद्गात्रात्रीया

- ४.७ अर्ग्. पर्याया-प्रीट्यायास्याः विवाया-राष्टः ह्रेनः श्री
- ४.१ हेषायहवाची सुर्ज्यासुरामह्रवर्म्यराह्न अर्म्याराहेर स्वाबा
- ४.४ हेश.८ह्मा.स्ट्रिंग.स्ट्रिंग.स्ट्रिंग.स्ट्रिंग.स्ट्रिंग
- ४.६ श्रेट्र स्वत् स्रेट्र स्पूर्य प्रचुक की सेट्र केंगा
- ४.५ क्र्या.शक्श्रा
- বৃ.৫ বাইন্'অর্থকা
- 4.9 ટ્રેંવ.૧૧૧૧૫.૮૩ૂં.ક્રે.୯ટી.૧૮૫
- ४.४ श्रेट.क्र्वा.चर्ड्रेट्.त.य.टेट.विट.क्र्वा

### यमक्ष्य प्रवीय स्तिर्द्धम्म

<-1 92.₽

- <ी•ी श्रीयु.श्रें×.र्थ्व
- ८१ १ र्वा ग्रे क्षिर र्ख्या
- < < 글스.젊.회적시기
- <•१ <u>छे</u>र:शुःकुःच
- <•< ग्रेन्'भु'रेट'वा
- ६.५ रट'राबेद'गी'यहग'र्ख्या
- <ে↑ শ্বী.পক্র'.গ্রী.পেইএ.স্ক্রিন
- <ার প্রবা.এহথা
- <•র•१ স্থিত,য়ৄৼ.ড়্লা
- <-१-१ র্ব'লী:শ্রুম'র্জ্বণা
- <- < तर्ने:न्र-रे:मानेकाग्री:तह्मार्ख्या
- <-- प्रति-दिनः श्चे विषयी प्रतिन स्थितः स्यातः स्थितः स्यातः स्थितः स्यतः स्यतः स्थितः स्थितः स्थितः स्थितः स्यतः स्थितः स्यतः स्थितः स्थितः

### जबाक्ष्य. स्तान। यैबाचिष्याक्षयाक्ष्यावी

- ५.७ ब्रेन्प्रबेयप्ना ब्रेन्यो में में में
- ५.१ वेद्रायवेषाद्रा वेद्राक्षेत्र क्षेत्र क्षेत्र क्षेत्र
- ५.५ व्रेन्प्रवेशप्र-एव्रेन्येन्ग्रीप्राम्बाख्याव्यक्षावानिर्देश
- ५.५ कूर्य, पहेवा, कंया, रेया, वीश्वया, सी. वीकूर, रुषा, ही, पहेवा, क्ष्या, रू. हूँ री
- त्रत् ह्रिट्रावर्षः बट्र-दुवाविषुअःसुः धेव ह्रेवः क्रिंकः अप् अदिः ह्रिवः ह्वा ह्वा व्यव्याद्वा विष्
- ५.५ क्रॅब. ह्या. थ्रट. व्यथिता. क्री. स्वीया. स्वीया. क्री. स्वीया. क्री. स्वीया. क्री. स्वीया. क्री. स्वीया. स्वीया. क्री. स्वीया. क्री. स्वीया. क्री. स्वीया. क्री. स्वीया. स्वीया.
- イ・み 転ぶ山上、埼ェ、は着ナ、は切り、大、、「裏上、上で、上が、は、ない。」
- ५.५ धुःसःग्रान्थः स्यापुरः प्रतेः स्यापुरः देतेः तह्याः र्ह्या

### जबाक्ष्य. येताता नुत्राप्तश्चीता

- ८.७ लुवा प्रचील की. स्. ह्रींस स्ट. हुपु . स्वूंब खिरावी
- ৫.৫ গ্রন্থ বেবন্দ্র গ্রন্থ বিদ্যান্ত্র বিদ্যান্ত্র
- ८.६ ८.ब्रूज.८८.कॅ४.ब्रूज.वी.वी.ली.जवी.घट्या
- ८.५ चनेर धेवा वी वी दें र दर देवे वही बर्वा
- ८.८ वाबःमुतःक्ंद्रवः८८ः देवःवर्शः वटला
- ८.७ टवा.वर्ड्रट.पद्य.घटळा
- ८.५ इर.ब्र्ज.८८.८.ब्र्ज.ब्री.अर्ब्र्च.खे.पद्म.घटळा.क्री.ट्र्च. पद्म.घटळा
- ८ । वियायम्वीवायान्यायम् वायायाः वियायम् । द्वायाः वियायम्
- ८.१० ग्रॅबाक्ट्रिंगी व्याद्व रटा देव वहा बरबा

### लबाक्ष्यः चरुषःच। चरुःर्देषःवसुवारेगा

- मूंबाऱ्या.क्ट. ह्ट.विदु.लिवा.विश्वेषाय.वर्श्वाय.घट्या
- अ.४ पर्चील.पस्त्रेथ.थट.जी. क्रूट.\वयु.लुवा.वाञ्चवाया.चर्थवाया.घटया

```
७.४ श्रॅंच. ऱ्चा. टट. पचील. पह्रीय. यट. जी. ब्रॅंट. चिट्र. क्रिंश. स्थाप. चट्या
७.९ म्ट्रिट. व.ली. वीतु. चीला वाङ्ट. अष्ट्रश्रवा क्र्यः मुखा स्थिता तटान । घटा
क्ष्मान्म्रीयदे नये म्
देशपर-५ अग-५ में पर्व ५ ५ थे बि
.
तर्चना क्रिया प्रहें जार्द्रवा याना श्रें पर हो। (२०१८) हॅमा याना में हुमा यो नर्चना। हो असी। पर्चना क्रिया यान
ॅ्ह्रट्'पः मॅर्ट्रा त्रवेषा क्षेत्र, क्ष्मिया (१९७७) पद्मिया में जिया पश्चरा अञ्चरा विश्वरा प्रदेश स्वर स्वर स
्रह्मातः मूम्यातन्त्र प्रमुक्ता (४०११) ह्मात्र प्राचित्र प्राचानुस्य प्रमुक्ता विद्या विद्यालयः अत्र प्रमुक्तान्यः अत्र प्राचित्र प्रमुक्तान्यः।
र्ह्रट वि. यूट प्रस्था (४०१४) र्ह्नट विते पाह पानि हास परिसे स्था प्रस्था हिमासी हिमासी हिमासी हिमासी स्थापन स्थापन
हॅट'प'र्ग्नर'तर्थन'क्षुत्र'र्छ्वार्यानु)'प्रॅट्य'तट्चेन'तकर'र्स्ने'त्र्रट-प्रॅट्'ग्ने' हॅट'प'ग्रह्'त'ग्रॉक्त,'सूत'क्षेत्र'रेग्न'शुवाबा(भ्रेत्र)ेर्ट
<u>ह्</u>ट..वि.सह्च.यार्ष्ट्र क्रूंच.क्रूंब.५२४.लेवाया(ख्र.नैज)यांच्य.ग्री.पर्नुज.सहीटी
https://www.dzongkha.gov.bt/uploads/files/downloads/Dzongkha typing tutor
setup 1.0.0 c7399525fb25292adef98df4b71d3329.exe
<u>इंट वि. मूट तर्वता क्षेत्र क्ष्मित्र (४०४४) इंट विते विट वर्दे पट मेर से प्रमूट वट्ट प्रमूट वट्ट विवा वित्रास</u>
मिक्केंट क्ष्मान्में प्रते न्ये में
हीय प्रज्ञेष पर्ट्स्य प्रचीया (१५५४) यीया है गोया प्रचीया पार्च्य र स्पेत से प्रचार्य स्वार स्वर सिव स्वर सिव स
पङ्ग्र कुषः अर्ह्म् रमः पर्वेम् द्रुष्ठावः के प्रपर्ः। (२०१२) मुक्षा द्वेषावः पञ्चेषावः गृत्वः याववः वे वेदः j Dhi Publication
पड्समुत्रा अर्कत् (१९११) पर्स् श्रून् पते ग्रुप् अवते ग्लोट पर्हेन् केत्र कॅ प्रह्मा ग्लीट मुन्र पार्डपा के पार्शे के पार्शेन् पर्दा भूत प्राप्तः।
```

https://www.dzongkha.gov.bt/uploads/files/publications/A\_guide\_to\_installation\_and\_configuration\_of\_Unicode Tools for Dzongkha 689180bbfee5de068edab6ea1a6449d1.pdf

या.पं.कृषा.मी.पञ्चरायाया (४००५) यायवातायात् त्यावाताम् वास्त्रात्यास्याः हात्वा सूर्यावाताया

हूट..(य.क्रॉट..प्रस्था.क्षेत्र.क्ष्योक्षा (४००४) *हूट.\वापु.ताद.गोवट.गोक्षप.त*। पर्राचा। द्वेत्र.सी कूट.!व.क्र्पट.परस्था.क्षेत्र.क्ष्योक्षा

**हैं क्य**ं हैं हैं त २०२५।

### **CSP101 Foundations of Python Programming**

Module Code and Title: CSP101 Foundations of Python Programming

हॅट व वॅट व वेया क्षेत्र केंवाला (१८५५) *हॅट विते 'भेवा 'भेर 'इस पानवा 'ग्लें पालर 'द्रावेश राते अनुव 'मुने 'राजूत 'श्रेट 'पा व*र्जवा। वेस्रासा मो लेस्राची।

**Programme** Bachelor of Economics and Politics, Bachelor of Digital

Communications and Project Management, Bachelor of Data

Science and Data Analytics

Credit: 12

ह्निट्रायर्थ, यु.ग्रीप्रानुयायान्यर्थ्यायाच्यान्यर्भ्या

Module Tutor(s): Sangay Thinley, Norbu Zangpo, Ngawang Choeda

**Module Coordinator:** Sangay Thinley

### **General Objective**

This module aims to provide students with a solid foundation in Python programming with a focus on data analysis. Students will learn fundamental programming principles and constructs in Python and apply them to manipulate and analyse data using popular data science libraries such as NumPy, Pandas, and Matplotlib. By the end of the module, students will be able to write programs to extract insights from data, perform data manipulation and cleaning, and create informative data visualizations.

#### **Learning Outcome**

On completion of the module, students will be able to:

- explain fundamental programming concepts, including algorithms and flowcharts, for problem-solving.
- 2. write, test, and debug Python programs using an IDE, applying appropriate syntax and constructs.
- 3. utilize variables, data types, and operators to perform calculations and manipulate data in Python.

- 4. implement loops, decision statements, and functions to develop structured and reusable Python programs.
- 5. apply Python's core data structures (strings, lists, sets, tuples, dictionaries) to solve computational problems.
- 6. use NumPy arrays for efficient data storage, manipulation, and analysis, including slicing, indexing, and aggregations.
- 7. perform data manipulation using Pandas, including reading/writing files, handling missing data, and filtering datasets.
- 8. extract and summarize key insights from structured datasets using Pandas and NumPy operations.
- 9. create and customize visual representations of data using Matplotlib for effective data storytelling.
- 10. develop simple data-driven applications using Python libraries for data analysis and visualization.

Teaching and Learning Approaches

Type	Approach	Hours per week	Total credit hours
	Lecture, Guided		
Contact	Discussions,	2	30
Contact	Presentation		
	Practical	2	30
	Assignments, Lab		
	Exercises &	2	30
Independent study	Projects		
	Self-study	2	30
Total	<u> </u>		120

The module will be delivered through a combination of lectures, practical sessions, and interactive teaching sessions. During lectures, the tutor will introduce the fundamental theories and concepts of Python programming, providing students with a strong theoretical foundation. Teaching sessions will reinforce these concepts through guided discussions and demonstrations, where students are encouraged to bring their laptops and actively engage in coding exercises. Practical sessions will focus on applying the concepts learned in lectures and teaching sessions, allowing students to write, test, and debug Python programs in a hands-on environment.

### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

### A. Online Quiz: (20%)

VLE quiz will be conducted twice in a semester. The first quiz will be conducted after completion of the first two topics and the second one after completion of the last three topics of the subject matter. Each quiz will be conducted for a duration of 1 hour.

#### B. Assignment: (25%)

A programming assignment will be given to the students after completing all the topics. The assignment will require the students to apply basic constructs of the Python language such as functions and loops in their solutions. The students will also be required to load and manipulate data, perform analysis, and create insightful visualisations using Python.

The evaluation will be based on the rubric:

Criteria	Excellent (5)	Good (4)	Satisfactory (3)	Needs Improvement
----------	---------------	----------	------------------	----------------------

				(2-1)
Code Implement ation & Functional ity (5%)	Code runs correctly, efficiently implements required constructs (functions, loops) with no errors.	Code runs with minor issues but meets most requirements.	Code runs with errors but attempts to implement key constructs.	Code is incomplete or does not meet the requirements.
Data Handling & Manipulati on (5%)	Data is successfully loaded, cleaned, and manipulated using appropriate Pandas/NumPy functions.	Data is handled well with minor inefficiencies or missing steps.	Basic data manipulation is attempted but lacks completeness.	Data handling is incorrect or missing.
Analysis & Insights (5%)	Data analysis is accurate, meaningful, and provides clear insights.	Analysis is mostly accurate, but some insights could be improved.	Basic analysis is present but lacks depth or clarity.	Analysis is incorrect, unclear, or missing.
Visualizati on & Presentati on (5%)	Visualizations are clear, well-labeled, and effectively convey insights.	Visualizations are mostly effective but could be improved in clarity.	Basic charts are present but lack necessary labels or interpretation.	Visualizations are unclear, missing, or incorrectly used.
Code Readabilit y & Document ation (5%)	Code is well- structured, properly commented, and easy to understand.	Code is mostly readable with some comments.	Code lacks clarity, with minimal or no comments.	Code is difficult to read, poorly structured, or undocumented

### C. Practical Test: (25%)

Practical Test will be conducted after the completion of the module and will cover all the units. The test will be conducted for 3 hours to test the student's ability to implement a given set of problems (a question from Topics 1 and 2, and another question from Topics 3, 4 and 5).

### D. Weekly Lab Assignment: (30%)

Weekly Lab Assignments will be based on the concepts taught in the theory class. Students will be provided a set of programming questions every week covering the concepts taught in each topic. The students will have to submit the solutions at the end of the lab session through the VLE.

The assessment criteria for for weekly lab assignment will follow:

Criteria	Full Marks (3)	Partial Marks (2- 1)	No Marks (0)
Completion & Accuracy (3%)	All problems are attempted and solved correctly.	Some problems attempted; minor errors present.	No attempt or solutions are incorrect.
Code Functionality (3%)	Code runs correctly and meets all requirements.	Code runs with minor issues but partially meets requirements.	Code does not run or is incomplete.
Use of Concepts (3%)	Proper application of taught concepts (loops, functions, libraries, etc.).	Some application of concepts, but not fully optimized.	Concepts are misused or missing.
Code Readability (3%)	Code is well- structured, properly formatted, and easy to understand.	Code is somewhat readable but lacks structure or comments.	Code is messy, unorganized, or unreadable.

### Overview of the assessment approaches and weighting

SI.No.	Areas of assessment	Quantity	Weighting (%)
Α	Online Quiz	2	20
В	Assignment	1	25
С	Practical Test	1	25
D	Weekly Lab Assignment	15	30
Total		19	100

Pre-requisites: NIL

### **Subject Matter**

### **Unit I: Fundamentals of Programming**

- 1.1 Introduction to Computer Programming and Programming Languages
- 1.2 Basic Concepts of Programming
- 1.3 Algorithm Design and Development
- 1.4 Flowcharts: Representing Algorithms Visually

### **Unit II: Introduction to Python Programming**

- 2.1 Setting Up Python Environment and IDE Usage:
  - 2.1.1 Writing
  - 2.1.2 Testing
  - 2.1.3 Debugging
- 2.2 Variables and Data Types in Python
- 2.3 Operators and Expressions for Data Manipulation
- 2.4 Control Structures: Conditional Statements and Loops
- 2.5 Functions: Definition, Application, and Reusability

- 2.6 Data Collections: Strings, Lists, Tuples, Sets, and Dictionaries
- 2.7 Choosing the Right Data Collection for a Given Problem

### **Unit 3: Data Manipulation with NumPy**

- 3.1 Introduction to NumPy and its Applications
- 3.2 Understanding NumPy Arrays and Data Types
- 3.3 Array Indexing, Slicing, and Reshaping
- 3.4 Universal Functions (ufuncs) and Aggregation Methods
- 3.5 Boolean Logic, Masking, and Filtering Arrays
- 3.6 Reading Tabular Data Files and Extracting Insights

#### **Unit 4: Data Analysis with Pandas**

- 4.1 Introduction to Pandas and its Data Structures (DataFrames, Series)
- 4.2 Importing and Exporting Data from Various Sources (Text, Excel, CSV)
- 4.3 Data Selection, Filtering, and Indexing Techniques
- 4.4 Data Modification and Assignment Methods
- 4.5 Handling Missing Data and Data Cleaning
- 4.6 Basic Data Manipulation for Visualization

#### **Unit 5: Data Visualization with Matplotlib**

- 5.1 Introduction to Matplotlib and its Components
- 5.2 Creating Different Types of Charts (Line, Bar, Scatter, Histogram, etc.)
- 5.3 Customizing Visualizations: Labels, Titles, and Legends
- 5.4 Presenting Data Effectively Through Plots

#### **Laboratory Sessions:**

### 1. Lab Session 1: Introduction to Programming Concepts

#### Task:

- Writing basic Python scripts in an IDE
- Designing simple algorithms and implementing them in Python
- Drawing and converting flowcharts into Python programs

### 2. Lab Session 2: Python Basics and Control Structures

#### Task:

- Declaring and using variables with different data types
- Using arithmetic, logical, and comparison operators
- Implementing conditional statements (if-else)
- Writing loops (for, while) for iterative processing
- Creating and using functions for modular programming

#### 3. Lab Session 3: Working with Python Data Structures

#### Task:

- String manipulations (slicing, formatting, methods)
- Creating and modifying lists, tuples, sets, and dictionaries
- Choosing the appropriate data structure for a given problem

#### 4. Lab Session 4: Introduction to NumPy

#### Task:

- Creating and manipulating NumPy arrays
- Performing array indexing, slicing, and reshaping
- Applying NumPy universal functions (ufuncs) for data analysis
- Using boolean logic for array filtering

### 5. Lab Session 5: Data Processing with Pandas

#### Task:

- Creating and exploring Pandas Series and DataFrames
- Importing and exporting data from CSV and Excel files
- Selecting, filtering, and modifying data in Pandas
- Handling missing values and cleaning datasets

#### 6. Lab Session 6: Advanced Data Analysis with Pandas

#### Task:

- Using Pandas groupby and aggregation functions
- Applying filtering and transformation techniques
- Performing basic exploratory data analysis (EDA) on real datasets

### 7. Lab Session 7: Data Visualization with Matplotlib

#### Task:

- Creating basic charts (line, bar, scatter, histogram)
- Customizing visualizations with titles, labels, legends, and styles
- Comparing multiple datasets in a single plot

### 8. Lab Session 8: Mini Data Analysis Project

#### Task:

- Applying Python, NumPy, Pandas, and Matplotlib to analyze an open dataset
- Data cleaning, manipulation, and visualization
- Writing a short report summarizing findings

#### Reading List:

#### **Essential Reading**

Deitel, P., & Deitel, J. (2020). Introduction to Python for Computer Science and Data Science Learning to Program with AI, Big Data and the Cloud. Pearson.

Nelli F. (2018). *Python data analytics with pandas Numpy and Matplotlib* (2nd ed.). Apress. https://doi.org/10.1007/978-1-4842-3913-1

#### **Additional Reading**

Lutz, M. (2013). Learning Python (5th ed.). OReilly.

Rao, R. N. (2017). Core python programming. Dreamtech press.

Sedgewick, R., Wayne, K., & Dondero, R. (2015). *Introduction to programming in Python: An interdisciplinary approach*. Addison-Wesley.

Date: February, 2025.

### **MAC101 Foundation of Digital Communication**

Module Code and Title: MAC101 Foundation of Digital Communication

Programme: Common module

Credit: 12

Module Tutor(s): Anju Chhetri

#### **General Objective**

The module will introduce how digital platforms have revolutionised the communication process across all aspects of human lives. Students will learn how digital technologies can be leveraged for a variety of purposes, ranging from personal to business related communication needs. The module will cover the principles of communication, which will be used to analyse digital platforms and technologies. Learners will be introduced to digital tools and strategies for trans-medial communication. They will have knowledge and skills of using digital tools that are curated to craft and communicate information. The module will enhance their learning throughout their study at university and beyond, through project-based learning, practical sessions and critiquing of existing digital applications used by various organisations. Further, it will also enhance students' capacity to critically reflect on their own learning.

#### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. define digital communication as a process.
- 2. analyse the different ways of storytelling in digital platform.
- 3. identify ethical dilemma associated with digital communication.
- 4. examine the implications and case studies of emerging digital technologies.
- 5. use digital tools to design digital campaign.
- 6. navigate effectively through design software for digital communication.
- 7. use design principles such as colour theory, typography and layout.
- 8. analyse the importance of brand messaging, storytelling and brand experience.
- 9. explain marketing and its fundamentals.
- 10. create different types of digital content.
- 11. use Al content creators for quick content creation.

#### **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours
	Facilitation and discussion	1	
Contact	In-class exercises	0.5	60
Contact	Lab tutorial	1.5	60
	Lab Practice	1	
	Field work	1.5	
Independe nt study	Script writing	1.5	60
in olday	Designing	1	
	Total	8	120

### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

### a. Digital Product Critique (10%)

This assessment will enable students to identify distinctive features of digital communication through the critical analysis of digital products. This individual assignment is intended to familiarise students with the dynamic functions of digital platforms enabling communication in a trans medial environment. Students will be asked to critique at least 5 existing digital platforms and analyse its unique features, advantages and disadvantages and storytelling techniques. This assessment will assess the learning outcome 1 and 2.

### **Digital Product Critique Assessment Criteria**

- 2 marks Analysis of communication process: Communication process is appropriately identified (precisely stated, appropriately rationalised, and strongly supported.)
- 4 marks Comparative analysis: Justification of comparison, aspects of product critiqued and analysis drawn from it
- 4 marks Supporting materials: Variety of explanations, examples, visuals, statistics, analogies, authoritative quotes, etc., and make appropriate reference to information or analysis that significantly supports the presentation.

### b. Create Brand Identity (20%)

Students will create a "Brand Identity" brochure using open-source design tool. Students will use the key elements of the brand's communication approach, including brand identity, messaging, visual branding, storytelling, and consistency. They will Identify the target audience and evaluate how effectively the brand communicates with them. They will Select a business idea of interest. Brainstorm and conceptualise the mission, vision for the brand. Conduct in-depth research on the brand's communication strategy and campaigns. Create the brand brochure highlighting core values, mission statement, and unique selling proposition (USP). Determine how these elements are communicated through the brand's messaging and visual branding. This assessment will assess the learning outcome 5, 8 and 9.

### **Brand Identity Assessment Criteria**

- 4 marks Brand Introduction: Clear description, name and justifications
- 4 marks Quality of mission and vision: Clear and concise
- 4 marks Colour and typography: colour and typography elements appropriately addressed
- 4 marks Design Consistency: Images, words, colour and other elements align consistently.
- 4 marks Digital tool: Adequate use of digital tools mandated by the programme

#### c. Content Creation (30%)

As part of this assignment, students will create a digital content piece using an open-source

digital tool introduced in practical sessions. The content may be in any digital format but must effectively reflect brand identity and value through design and storytelling. This assignment assesses Learning Outcomes 10 and 11.

#### **Content Creation Assessment Criteria**

- 5 marks Platform & Format: The content aligns with the chosen digital platform and follows its specific features and format requirements.
- 8 marks Storytelling & Purpose: The content demonstrates a clear purpose, well-defined goals, and an understanding of the target audience. The message is engaging and effectively conveyed.
- 5 marks Use of Tools: The student demonstrates proficiency in using an open-source AI or digital tool to enhance content creation.

- 6 marks Visual & Audio Quality: The visuals and/or audio are high quality, clear, and effectively enhance the content's engagement and message.
- 6 marks Script & Narrative: The script is well-structured, engaging, and supports the **storytelling aspect of the content. It maintains clarity and coherence throughout.**

### d. Group Project (Digital Campaign) (40 %)

For their final project, digital communication students will develop a simple digital campaign for a brand, product, or cause using a social media ads manager. Students must present their campaign to the class, demonstrating their ability to apply knowledge and skills to real-world scenarios. The project will assess the learning outcomes 1 to 11 based on the following criteria:

### **Group Project (Digital Campaign) Assessment Criteria**

- 8 marks Use of Tools: Demonstrates appropriate and effective use of digital tools, including social media ads manager and relevant platforms.
- 10 marks Research & Strategy: Conducts thorough research and develops a clear, data-driven campaign strategy aligned with objectives and audience insights.
- 8 marks Quality of Presentation: Communicates ideas effectively, engages the audience, and presents content in a structured, professional manner.
- 10 marks Quality of Visuals & Written Content: Ensures high-quality visuals, compelling copy, and a cohesive message that enhances the campaign's effectiveness.
- 4 marks Adherence to Brand Value: Aligns campaign elements with the brand's identity, values, and messaging to maintain consistency and authenticity.

### Overview of the assessment approaches and weighting

Continuous assessment	Are	as of assignments	Quantity	Weighting (%)
A (Theory)	a.	Digital critique	1	10%
	a.	Brand Identity	1	20%
B (Practical)	b.	Content Creation	1	30%
	C.	Group Project	1	40%
Total			100	

Pre-requisites: None

**Subject Matter** 

### **Unit I: Introduction to Digital Communication**

- 1.1 Define Communication
  - 1.1.1 Transmission model of Communication
  - 1.1.2 Interaction model of Communication
  - 1.1.3 Transactional model of communication
- 1.2 Principles of communication
- 1.3 Communication and perception
- 1.4 Definition of digital media and digital communication
  - 1.4.1 Distinctive feature of digital media enabled communications
  - 1.4.2 Forms of digital communication and platforms
  - 1.4.3 Digital Media and Convergence

- 1.4.4 Digital communication for business
- 1.5 Interactive Storytelling
  - 1.5.1 A brief History, Convergence
  - 1.5.2 Old tools/New tools, Character, dialogue and emotions, immersive entertainment
  - 1.5.3 Contemporary examples from social media platforms

### **Unit II: Ethics in Digital Communication**

- 2.1 General professional ethics in digital world
- 2.2 Concept of Confidentiality in effective communication
- 2.3 Digital work environment and its ethical challenges
- 2.4 Digital communication and its audience
- 2.5 Digital footprint and its consequences
- 2.6 Concept of privacy and digital identity
- 2.7 Concept of Cyberbully and relevant case studies
- 2.8 Intellectual property and digital products
- 2.9 Ethical considerations in artificial intelligence
  - 2.9.1 Blockchain and ethical usage
  - 2.9.2 design a digital communication plan with all ethical considerations

### **Unit III: Introduction to Digital Tool**

- 3.1 Understanding digital tools
  - 3.1.1Canva interface
- 3.2 Branding and Identity
  - 3.2.1 Creating consistent visual branding elements (logo, color scheme, fonts),
  - 3.2.2 Applying brand guidelines to design projects
  - 3.2.3 Learning the basics of colour theory and its application
  - 3.2.4 Understanding typography and font selection
  - 3.2.5 Exploring layout and composition techniques
- 3.4 Social Media Graphics
  - 3.4.1 Designing engaging Instagram and Facebook posts
  - 3.4.2 Creating attention-grabbing thumbnails for YouTube videos
  - 3.4.2 Designing Twitter headers and LinkedIn banners"
- 3.5 Image Editing
  - 3.5.1 Enhancing and retouching images
  - 3.5.2 Adjusting brightness, contrast, and saturation
  - 3.5.3 Removing backgrounds and creating transparent images
- 3.6 Web Design
  - 3.6.1 Designing website headers, banners, and hero images,
  - 3.6.2 Creating user-friendly web graphics and icons
  - 3.6.3 Understanding responsive design principles
- 3.7 Presentation Design
  - 3.7.1 Creating professional slide decks for presentations
  - 3.7.2 Using visual elements to enhance storytelling
  - 3.7.3Designing effective charts and graphs

#### **Unit IV: Brand Communication**

- 4.1 Evolution of brand storytelling and post advertising era
  - 4.1.1 What is branding, brand identity, brand value and brand experience
  - 4.1.2 Approaches to Marketing (basic concepts, marketing in digital world)
  - 4.1.3 Strategic brand storytelling, Tactical Brand story, Company Centric story, Customer-Centric

#### **Unit V: Content Creation**

- 5.1 Content Principles
  - 5.1.1 law of relevance and law of coherence
  - 5.1.2 Coherence Vs preference
  - 5.1.3 Relevant cases and examples
- 5.2 Define the purpose and goals
- 5.3 Identify target audience
- 5.4 Content Type and Format
- 5.5 Research on topic and brainstorm ideas
- 5.6 Scripting and Storyboarding
- 5.7 Gather and prepare assets for production
- 5.8 Post production
  - 5.8.1 Basics of photography
  - 5.8.2 Videography
  - 5.8.3 Audio and visual editing

### Reading List

#### **Essential Reading**

Moin, S. M. A. (2020). Brand storytelling in the digital age: Theories, practice and application. Palgrave Macmillan.

Miladi, N. (Ed.). (2021). Global media ethics and the digital revolution. Routledge.

Chiaravalle, B., & Schenck, B. F. (2014). Branding for dummies. John Wiley & Sons.

Fawkes, J., & Gregory, A. (2001). Applying communication theories to the Internet. Journal of Communication Management, 5(2), 109-124. https://doi.org/[DOI if available]

Haig, M. (2005). Brand failures: The truth about the 100 biggest branding mistakes of all time. Kogan Page Publishers.

Williams, R. (2015). The non-designer's design book: Design and typographic principles for the visual novice. Pearson Education.

### **Additional Reading**

van Dijck, J. (2013). The culture of connectivity: A critical history of social media. Oxford University Press.

Boyd, d., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. Journal of Computer-Mediated Communication, 13(1), 210-230. https://doi.org/[DOI if available]

Goffman, E. (1959). The presentation of self in everyday life. Doubleday.

Rheingold, H. (2012). Net smart: How to thrive online. MIT Press.

Turkle, S. (2011). Alone together: Why we expect more from technology and less from each other. Basic Books.

University of Southern California. (2021). Digital communication ethics. Retrieved from https://online.usc.edu/programs/articles/digital-communication-ethics/

Date: February 2025

### **DAT102 Foundations of Data Science**

Module Code and Title: DAT102 Foundations of Data Science

**Programme:** Bachelor of Economics and Politics, Bachelor of Digital

Communications and Project Management, Bachelor of Data

Science and Data Analytics

Credit: 12

Module Tutor(s): Norbu Zangpo, Ngawang Choeda

Module Coordinator: Norbu Zangpo

### **General Objective**

The aim of this module is to provide students with a practical foundation in data science, focusing on the skills and tools necessary for real-world data analysis using visual software such as Orange. Students will gain experience working with various types of data, including structured and will learn how to use software tools to perform common data analysis tasks such as data pre-processing, data visualization, and predictive modelling. Throughout the course, students will be challenged to apply their knowledge to real-world data problems, working individually and in teams to develop practical data analysis solutions

#### **Learning Outcome**

On completion of the module, students will be able to:

- 1. Describe the definition, scope, and applications of data science across various domains.
- 2. Identify and categorize different types of data and explain their characteristics and uses in data science.
- 3. Explain the data science lifecycle and the roles of key stakeholders involved in the process.
- 4. Analyze ethical considerations, legal frameworks, and privacy issues related to data science.
- 5. Assess and address issues of bias, fairness, and the social implications of data science.
- 6. Apply statistical methods, including descriptive statistics and probability distributions, to analyze data.
- 7. Execute techniques for data cleaning, preprocessing, and transformation to ensure high-quality data.
- 8. Utilize data wrangling tools to integrate, merge, and visualize data from multiple sources.
- 9. Implement machine learning algorithms, including supervised and unsupervised learning, to solve data science problems.
- 10. Evaluate machine learning models using appropriate performance metrics and optimize model parameters for improved accuracy.

**Teaching and Learning Approaches** 

Туре	Approach	Hours per week	Total credit hours
	Lecture, Guided		
Contact	Discussions,	2	30
Contact	Presentation		
	Practical	3	45
	Assignments, Lab		
In donon dont atualu	Exercises &	1	15
Independent study	Projects		
	Self-study	2	30
Total			120

The module will be taught using teaching sessions and practical sessions.

**Teaching methods**: Tutors can use a combination of lectures, labs, and online resources to introduce the concepts and tools of data science. Tutors may also use interactive software such as Orange to demonstrate how to perform data analysis tasks using visual programming.

**Learning tasks**: Tutors can assign students various types of data sets (such as text, images, audio, etc.) and ask them to perform data analysis tasks using Orange or other software tools. Students may be required to present their findings in a report or a presentation. Tutors can also design group projects where students collaborate to solve a real-world data problem using data science techniques.

#### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches.

NOTE: A student must achieve a pass mark (minimum 40%) in each assessment category and an overall minimum score of 50% to pass the module.

### A. Online Quizzes: (20%)

Online Quizzes will be conducted after completion of every Unit as part of the continuous performance monitoring of the students. There will be a total of 5 quizzes (each worth 5%) out of which the best 4 will be considered for 20%. The quiz will be conducted for a duration of 1 hour through the VLE platform.

### B. Group Assignment: (35%)

The group project requires examining a sizable dataset that has been provided, cleaning and preprocessing the data, exploring and visualising the data, using statistical analysis and machine learning techniques to draw conclusions and create predictive models, and present the results to the class. The objective is to use the knowledge and abilities acquired in the course to solve a practical issue.

The project will evaluated based on the following criteria:

Data Cleaning and Preprocessing: (20%)

Exploration and Visualization: (20%)

Statistical Analysis and Machine Learning: (25%)

Results and Interpretation: (20%)

Group Collaboration and Presentation: (15%)

### C. Lab Assessment: (35%)

There are three parts to the laboratory assessment: lab work, a practical test, and a viva.

Applying the understanding of data science ideas to tasks involving data cleaning, visualization, statistical analysis, and machine learning is required for the lab assignments.

The practical exam will be a timed, in-person examination that will gauge how well the student can use the knowledge and abilities gained in the course to address problems that arise in the real world.

Oral examinations are part of the interview. Students will be questioned about the ideas covered in the course and asked to describe the reasoning and methodology for finishing the lab assignments and practical exam.

#### D. Class Activities: (10%)

Participation in class discussions, online forums, and other interactive activities can also be assessed. This can include the quality and quantity of contributions made by the student, as well as their ability to provide constructive feedback to their peers.

#### Overview of the assessment approaches and weighting

SI.No.	Areas of assessment	Quantity	Weighting (%)
Α	Online Quizzes	4	20
В	Group Assignment	1	35
С	Lab Assessment	1	35
D	Class Activities	1	10
Total		7	100

Pre-requisites: NIL

### **Subject Matter**

#### **Unit I: Introduction to Data Science**

- 1.1 Basics of Data Science
  - 1.1.1 Define Data Science and explain its key components.
  - 1.1.2 Scope and applications of Data Science across various domains such as business, healthcare, finance, etc.
- 1.2 Understanding Data
  - 1.2.1 Different types of data: structured, unstructured, semi-structured.
  - 1.2.2 Data collection methods and sources.
  - 1.2.3 Importance of data in the modern world.
- 1.3 Stakeholders in Data Science
  - 1.3.1 Roles of data scientists, data engineers, analysts, and other stakeholders in the data science lifecycle.
  - 1.3.2 Collaboration between data scientists and business decision-makers.
- 1.4 Data Science Tools and Frameworks
  - 1.4.1 Overview of popular tools used in data science (e.g., Python, R, Jupyter Notebooks, SQL, Hadoop, TensorFlow, etc.).
  - 1.4.2 Introduction to frameworks used for machine learning and data analysis (e.g., Scikit-learn, Pandas).
  - 1.5 Data Science Lifecycle
- 1.5.1 Phases of the data science lifecycle: Problem definition, data collection, data preprocessing, modeling, evaluation, and deployment.

#### **Unit II: Data Ethics and Privacy**

- 2.1 Ethical Implications in Data Science
- 2.2 Overview of ethical considerations and implications in the use of data (privacy, consent, transparency).
- 2.3 Privacy and Legal Frameworks
  - 2.3.1 Key concepts in data privacy and security (e.g., GDPR, HIPAA).
  - 2.3.2 Legal frameworks governing data collection and analysis.
- 2.4 Bias and Fairness
  - 2.4.1 Understanding bias in data and algorithms.
  - 2.4.2 Methods to address fairness issues in data and machine learning Models.
- 2.5 Historical and Current Ethical Issues
  - 2.5.1 Case studies of ethical dilemmas in data science (e.g., biased hiring algorithms, misuse of personal data).
  - 2.5.2 Ongoing debates and solutions in data ethics.
- 2.6 Evaluating Data Sources and Tools
  - 2.6.1 Best practices for evaluating and selecting data sources and tools with ethical considerations.

#### **Unit III: Fundamentals of Data Analysis**

- 3.1 Overview of Data Analysis
  - 3.1.1 Importance and scope of data analysis in data science.
  - 3.1.2 Organizing the data analysis process: problem definition, data

collection, cleaning, and analysis.

- 3.2 Exploratory Data Analysis (EDA)
  - 3.2.1 Techniques for exploring and visualizing data (e.g., summary statistics, histograms, scatter plots).
- 3.3 Descriptive Statistics
  - 3.3.1 Calculating and interpreting key statistical measures: mean, median, mode, variance, standard deviation.
- 3.4 Probability Distributions
  - 3.4.1 Overview of common probability distributions (normal, binomial, Poisson) and their use in data analysis.
- 3.5 Multiple Regression Analysis
  - 3.5.1 Introduction to multiple regression analysis for predicting outcomes.
  - 3.5.2 Model selection techniques and evaluation of multiple regression Models.
- 3.6 Supervised vs Unsupervised Learning
  - 3.6.1 Introduction to supervised learning techniques (e.g., classification, regression).
  - 3.6.2 Introduction to unsupervised learning techniques (e.g., clustering, association rules).

### **Unit IV: Data Management and Wrangling**

- 4.1 Data Management in Data Science
  - 4.1.1 Importance of managing large volumes of data.
  - 4.1.2 Identifying and handling issues related to data quality.
- 4.2 Data Cleaning and Preprocessing
  - 4.2.1 Techniques for cleaning data: handling missing values, dealing with outliers, and encoding categorical variables.
  - 4.2.2 Data preprocessing techniques such as normalization, scaling, and Transformation.
- 4.3 Merging and Integrating Data
  - 4.3.1 Combining multiple datasets from different sources and formats.
  - 4.3.2 Techniques for data integration and handling different data structures.
- 4.4 Data Visualization
  - 4.4.1 Creating effective data visualizations (e.g., bar charts, line plots, pie charts).
  - 4.4.2 Using visualization tools to identify patterns and communicate insights.

### **Unit V: Machine Learning**

- 5.1 Introduction to Machine Learning
  - 5.1.1 Define machine learning, its scope, and its importance in the context of data science.
  - 5.1.2 Difference between Artificial Intelligence, Machine Learning, and Deep Learning.
- 5.2 Types of Machine Learning
  - 5.2.1 Overview of different types of machine learning (supervised, unsupervised, and reinforcement learning).
  - 5.2.2 Discussion on classification, regression, clustering, and association rule Learning.
- 5.3 Supervised Learning Algorithms

- 5.3.1 Detailed explanation of classification and regression algorithms (e.g., Decision Trees, Random Forests, KNN, Logistic Regression).
- 5.4 Unsupervised Learning Algorithms
  - 5.4.1 Clustering algorithms (e.g., K-Means, DBSCAN) and their applications.
- 5.5 Model Performance Evaluation
  - 5.5.1 Understanding and calculating performance metrics: accuracy, precision, recall, F1-score, AUC.
  - 5.5.2 Cross-validation and overfitting.
- 5.6 Hyperparameter Tuning
  - 5.6.1 Techniques for optimizing machine learning models using grid search, random search, and Bayesian optimization.
- 5.7 Building a Predictive Model
  - 5.7.1 End-to-end process of building a predictive machine learning model: data preparation, model selection, training, evaluation, and deployment.

### **Laboratory Sessions:**

#### 1. Lab Session 1: Getting Started with Data Science

#### **Activities:**

- Introduce Python basics and environment setup (e.g., installing libraries such as NumPy, Pandas).
- Perform basic data manipulations with Python.
- Explore data science libraries and tools (e.g., Pandas, Matplotlib).
- Discuss the data science life cycle through examples.

### 2. Lab Session 2: Ethical Considerations in Data Collection and Analysis

#### **Activities:**

- Review case studies on data ethics and privacy issues.
- Work with publicly available datasets and examine ethical concerns related to data collection.
- Identify potential privacy risks in data and propose mitigation strategies.
- Discuss the importance of fairness and bias in machine learning models.

#### 3. Lab Session 3: Exploratory Data Analysis (EDA)

#### **Activities:**

- Load a dataset and perform initial exploratory data analysis (EDA).
- Use statistical methods to summarize the data (mean, median, mode).
- Visualize data distributions and relationships using scatter plots, histograms, and box plots.

### 4. Lab Session 4: Descriptive Statistics and Probability Distributions

#### **Activities:**

- Calculate and interpret descriptive statistics for a dataset.
- Use Python to plot different probability distributions (e.g., normal, binomial) and compare them with actual data.
- Apply probability distributions to real-world problems.

### 5. Lab Session 5: Data Cleaning and Preprocessing

#### **Activities:**

- Handle missing values, remove duplicates, and deal with outliers.
- Normalize and standardize numerical features.
- Encode categorical variables for machine learning models.

### 6. Lab Session 6: Data Integration and Merging

#### **Activities:**

- Merge datasets from different sources (CSV, Excel, SQL).
- Apply data transformation techniques like reshaping and pivoting.
- Perform simple joins and aggregations on merged datasets.

#### 7. Lab Session 7: Data Visualization

#### **Activities:**

- Use Matplotlib and Seaborn to create various charts (bar charts, line plots, heatmaps).
- Create interactive plots using Plotly or similar libraries.
- Interpret the visualizations to draw insights.

### 8. Lab Session 8: Introduction to Supervised Learning

#### **Activities:**

- Train a classification model (e.g., logistic regression, decision trees) on a labeled dataset.
- Evaluate model performance using accuracy, precision, recall, and F1-score.
- Perform hyperparameter tuning using grid search or random search.

### 9. Lab Session 9: Unsupervised Learning and Clustering

#### **Activities:**

- Apply K-Means clustering on an unlabeled dataset.
- Evaluate the clusters and interpret the results.
- Use dimensionality reduction techniques like PCA to visualize clusters.

### 10. Lab Session 10: Model Evaluation and Hyperparameter Tuning

#### **Activities:**

- Split a dataset into training and testing sets.
- Train a regression or classification model and evaluate its performance.
- Fine-tune model parameters to improve accuracy using cross-validation and hyperparameter optimization.

#### 11. Lab Session 11: Building a Predictive Machine Learning Model

#### **Activities:**

- Select an appropriate machine learning algorithm for a predictive task.
- Train the model on the training dataset and test it on the test dataset.

Evaluate the model's performance using performance metrics and compare different algorithms.

#### Reading List:

#### **Essential Reading:**

McKinney, Wes. (2017). Python for Data Analysis. O'Reilly Media, Inc.

Grus, Joel. (2015). Data Science from Scratch: First Principles with Python. O'Reilly Media, Inc.

James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). An Introduction to Statistical Learning: with Applications in R. Springer.

Hastie, T., Tibshirani, R., & Friedman, J. (2009). The Elements of Statistical Learning: Data Mining, Inference, and Prediction. Springer.

Date: February, 2025.

#### LAC103 Academic Research Skills

Module Code and Title: LAC103 Academic Research Skills

**Programme:** Bachelor of Economic and Political Science, Bachelor of Digital Communication

and Project Management, Bachelor of Data Science and Data Analytics

Credit: 12

Module Tutor(s): Sonam Dendup, Sangay Choden, Tshering Samdrup

Module Coordinator: Sonam Dendup

#### **General Objective**

This module aims to develop critical thinking and academic writing skills, with a particular emphasis on research. Students will learn to locate and evaluate sources, analyse evidence, and identify underlying assumptions in various reading materials. The course covers rhetorical concepts to help students understand contexts and audiences, aiding in both comprehension and composition of texts. Additionally, students will explore multiple composing processes and will be introduced to disciplinary writing conventions, including understanding plagiarism, how to avoid it, and proper source documentation.

### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. analyse audience characteristics and write effectively to address their needs.
- 2. write concise and accurate summaries of texts.
- 3. identify and apply an effective workflow in their writing projects.
- 4. recognize and explain the interconnection between reading and writing.
- 5. deliver academic presentations effectively.
- 6. employ rhetorical strategies to communicate ideas effectively.
- 7. apply revision techniques to improve their writing.
- 8. locate relevant sources on a given topic and document them accurately.
- 9. integrate sources effectively to support their personal ideas.
- 10. reflect on and identify their growth and development as writers.
- 11. synthesize their knowledge and deepen their understanding of a chosen subject through writing.

### **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours
------	----------	----------------	--------------------

	Facilitation and discussion	1.5	
Contact	Writing Workshop/Group work	2	60
	Presentations	0.5	
	Portfolio writing and revising	2	
Independe nt study	Forum participations	0.5	60
	Reading assigned readings	1.5	
Total		8	120

### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

#### Portfolio 1: Personal and Academic Writing

### A. Personal Essay (7%)

The writing assignment will be a personal essay on a topic selected by the tutor. The assignment will provide students to explore how their life experiences have affected how they think/ feel about the selected topic. The essay should be 500-600 words. Students should follow the guide provided in *Storytelling, Narration, and the 'Who Am I' Story*.

### **Personal Essay Assessment Criteria**

- 1 Mark Vividness of events: Events are vividly described with strong sensory details, making the story immersive.
- 1 Mark Character Development: Characters are well-developed through actions, dialogue, and thoughts, making them feel real.
- 1 Mark Narrative time: Time shifts (past/present) and pacing are used effectively for storytelling.
- 1 Mark Dominant Impression: Essay creates a strong, consistent central impression that evokes emotions.
- 1 Mark Show and don't tell: Skilfully uses action, dialogue, and detail to show emotions and experiences.
- 1 Mark Organization & Clarity: Grammar, Mechanics & Style: Writing is polished, with few or no grammar/spelling errors.
- 1 Mark Grammar, Mechanics & Style: Writing is polished, with few or no grammar/spelling errors.

#### **B.** Summary (7%)

Students will select an essay from a pool on a selected topic and write a 500-600 word summary on it. This summary will be part of the class text to be used by your classmates in writing the third essay in this portfolio. The goals of the assignment are to read accurately and condense information such that key ideas are identified and summarized correctly.

- 2 Marks Comprehension: Clearly identifies main ideas.
- 2 Marks Clarity, Coherence: Logical flow and easy to understand.
- 1 Mark Conciseness: Avoids unnecessary details and repetition.
- 1 Mark Structure and Organization: Grammar, Mechanics & Style: Well structured summary with author and article title
- 1 Mark Grammar, Mechanics & Style: Writing is polished, with minimal grammar/spelling errors.

#### C. Response Using Personal Experience (16%)

This assignment will entail to provide a response to ideas from readings summarized earlier using personal experience. It should summarize the main ideas from your classmate's reading and how and why those ideas are similar or different from your own personal experiences.

- 4 Marks Summary: Clearly and accurately summarize author's key points in an organized and concise manner
- 4 Marks Response and Interpretation: Thoughtfully engages with the author's ideas, making insightful connections to personal experiences, knowledge, or real-world examples.
- 4 Marks Argument and Positioning: Clearly establishes a strong, well-supported position (agree, disagree, or partial agreement) with reasoning and examples.
- 4 Marks Clarity Organization and Grammar: Writing is clear, well-organized, and nearly free of grammar/spelling errors.

### Portfolio 2 Source Evaluation and Response

### D. Source Evaluation (15%)

In smaller groups, students will explore multiple sources of text using library resources on a particular issue. Students will then write an essay that summarizes the texts and discusses how ideas are expressed and for what purpose they are intended.

- 2 Marks Summary of the source: Provides a comprehensive and concise summary of the courses.
- 2 Marks Depth of analysis: Demonstrate insightful critique and through evaluation.
- 2 Marks Use of evidence: Integrates strong and relevant examples throughout.
- 2 Marks Comparison of sources: Provides strong comparative insights with well-developed contrasts.
- 2 Marks Intended audience and purpose: Clearly identifies that intended audience and purpose for each source.
- 2 Marks Use of rhetorical strategies: Analyse rhetorical strategies effectively, providing insights.
- 2 Marks Evaluation of credibility: Evaluates the credibility of sources thoroughly and accurately.
- 1 Mark Reflection and engagement: Demonstrate deep reflection and engagement with sources.
- 1 Mark Organization and clarity: Well organized and clear, with logical flow of ideas.
- 1 Mark Grammar and style: No grammatical, spelling, or punctuation errors and good style.

#### E. Response Using sources (20%)

In this 1200-1500 word essay, students will revisit the response format they used previously. Rather than relying solely on personal experience, they will incorporate external sources to substantiate their agreement or disagreement with the author's ideas. This approach is common in academic writing and serves as a foundation for developing independent arguments.

- 4 Marks Agreement/disagreement with author: Clear statement of agreement or disagreement with justifications.
- 4 Marks Use of sources: Effectively incorporates a variety of sources to support the argument; all sources are relevant and credible.
- 3 Marks Audience awareness: Clearly identifies and address the target audience; understand and meets their expectation for focus, organization, evidence and style.
- 3 Marks Organization and coherence: Well organized with clear logical flow of ideas; paragraph are well-structured and transitions are smooth.
- 3 Marks Balance of thoughts: Balance of personal insights and outside source material; sources enhances and complements the argument.
- 2 Marks Proper Citation: All sources are cited in APA format with no errors.
- 1 Mark Grammar and style: No grammatical, spelling or punctuation errors. Good writing style.

#### **Miscellaneous Process**

- **F.** Quiz (10%): Two online quizzes will be conducted, based on the assigned weekly readings. These quizzes will be designed to assess students' understanding and engagement with the course material.
- **G.** Free Writing (5%): Students will engage in weekly 10-minute free writing exercises on various topics. Each piece should be between 150 and 300 words. Completion of each exercise will earn 0.5%, contributing to the final grade. This activity encourages idea generation, creativity, and writing fluency without pressure for perfection.
- H. Attendance (5%): Regular attendance is crucial for participating in class activities and discussions. Students are allowed to miss up to three classes without any penalty. However, for each additional absence, 1% will be deducted from the attendance grade. Missing eight or more classes will result in a zero for this component.
- I. Forum Participation (5%): Students will be assessed based on the frequency and quality of their contributions. High-quality participation involves following and building on existing conversations and contributions should be thoughtful, relevant, and encourage further dialogue among peers.
- **J.** Reflecting on Your Writing (10%): Module Postscript: In this last assignment, the student will write a reflection essay of 600–800 words to show how their writing knowledge and skills developed over the semester. They will discuss what they have learned about academic writing.
  - 2 Marks Development of writing skill: Clearly demonstrate significant development in writing skills over the semester.
  - 3 Marks Understanding of academic writing: Explain what has been learnt about academic writing.
  - 3 Marks Evaluation of earlier essay: *Provide comprehensive evaluation of an essay using tools and topics discussed throughout the semester and mention how you would improve if you revise again.*
  - 1 Marks Organization and clarity: Well organized with clear logical flow of ideas; paragraph are well-structured and transitions are smooth.
  - 1 Marks Grammar and style: No grammatical, spelling or punctuation errors. Good writing style.

### Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A Portfolio 1	A. Personal Essay	1	7%
	B. Summary	1	7%
	C. Responses using personal experience	1	16
B Portfolio 2	D. Source Evaluation	1	15
	E. Comparison of two discourse	1	20
	F. Reflecting on your writing		
	G. Homework, attendance and Participation		
Total		100	

Pre-requisites: None Subject Matter

1. Unit I: Writing Process and Reading Strategies

### 1.1. Writing Process and Workflow

- 1.1.1. Understanding the stages of the writing process (prewriting, drafting, revising, editing, and publishing).
- 1.1.2. Applying effective workflow techniques tailored to writing projects.
- 1.2. Interconnection Between Reading and Writing
  - 1.2.1. Exploring the influence of reading on writing and vice versa.
  - 1.2.2. Analyzing examples to understand how reading can inspire and improve writing.
- 1.3. Reading for Different Purposes
  - 1.3.1. Identifying and distinguishing between various purposes for reading (e.g., learning, pleasure, research).
  - 1.3.2. Implementing appropriate reading strategies for different contexts.
- 1.4. Reading as a Prewriting Strategy
  - 1.4.1. Using reading materials to generate ideas and develop critical thinking skills before writing.
  - 1.4.2. Engaging in prewriting activities based on insights gained from reading.
- 1.5. Collecting, Planning, and Organizing Writing
  - 1.5.1. Techniques for collecting information, planning, and organizing writing projects.
  - 1.5.2. Implementing strategies such as brainstorming, outlining, and using graphic organizers.

### 2. Unit II: Audience Awareness and Summarizing

- 2.1. Audience Analysis and Writing
  - 2.1.1. Analyzing audience characteristics to tailor writing effectively.
  - 2.1.2. Understanding genre conventions to meet the expectations of readers and writers.
- 2.2. Summarizing Texts
  - 2.2.1. Understanding the importance of summarizing in various contexts.
  - 2.2.2. Techniques for writing concise and accurate summaries.

### 3. Unit III: Organizing, Revising, and Academic Writing

- 3.1. Rhetorical Strategies in Writing
  - 3.1.1. Employing rhetorical strategies to communicate ideas effectively.
  - 3.1.2. Techniques for organizing material logically to present information clearly.
- 3.2. Revision Techniques
  - 3.2.1. Applying revision strategies to improve written work.
  - 3.2.2. Understanding and constructing academic arguments with appropriate style and tone.

### 4. Unit IV: Finding, Evaluating, and Responding to Sources

- 4.1. Locating and Documenting Sources
  - 4.1.1. Techniques for finding relevant sources on a topic and documenting them accurately.
  - 4.1.2. Strategies for presenting data clearly to readers.
- 4.2. Integrating Personal Experience with Data
  - 4.2.1. Blending personal experiences with data to support arguments.
  - 4.2.2. Using sources effectively to bolster personal ideas.

#### 5. Unit V: Reflection on Writing

- 5.1. Self-Awareness and Development as a Writer
  - 5.1.1. Reflecting on personal growth and development in writing.
  - 5.1.2. Consolidating knowledge and deepening understanding of subjects through writing.

#### Reading List

#### **Essential Reading**

Daniels-Lerberg, T., Driscoll, D., Stewart, M., & Vetter, M. (Eds.). (2023). Writing spaces: Readings on writing (Vol. 5). Parlor Press.

Driscoll, D., Heise, M., Stewart, M., & Vetter, M. (Eds.). (2021). Writing spaces: Readings on writing (Vol. 4). Parlor Press.

Driscoll, D., Stewart, M., & Vetter, M. (Eds.). (2020). Writing spaces: Readings on writing (Vol. 3). Parlor Press.

Lowe, C., & Zemliansky, P. (Eds.). (2010). Writing spaces: Readings on writing (Vol. 1). Parlor Press.

Lowe, C., & Zemliansky, P. (Eds.). (2011). Writing spaces: Readings on writing (Vol. 2). Parlor Press.

### **Additional Reading**

American Psychological Association. (2020). *Publication manual of the American Psychological Association* 2020: The official guide to APA style (7<sup>th</sup> ed.). American Psychological Association.

Date: February 2025

LAC102 至二四美知子可

هُِلِد.هِمْ هد.كد هُلِد هِمْ هِلا ا

LAC102 ह्टापाईकारेगा

୷୶ୖଽ୶୲

यात्रशःश्चर :र्कतः देया 'र्र-'र्र् छे र्धर :यात्रशःश्चर :र्कतः देया।

ষ্ট্রিন:বেপ্রঝা

13 1

क्रैंट.क्ष्यंश्चेंच.क्षेंयःना

ह्रिट.प्रयु.ज्येबाश.यपेटेनी

र्श्वेटःक्ष्यंत्रम्।

मेश्रास्याञ्चात्रव्याङ्ग्रीयायाः क्रेत्रवी

## श्चीर पहरायशर्देवा

# ध्रुंचःध्रुंटःबीचःयवश

र्ब्युट रक्ष तर्दे सह्या नसूस र र्श्विन स्या र्स् योश्व

- १ ध्वैर प्रत्र र्रें अर्रे गागी प्रीं अप्तर स्रुप्त स्रुपा स्
- व शुर-रेग्रय-१६वादी भ्रमादी भ्रमादे र्राष्ट्र-ग्रय-र्स्थायन रेने भ्रम्य
- < ग्रवतः नेटः नटः त्रचेवः चतिः तुमः सुटः त्र्यां गः चक्कवः चर्चः सुवः त्यन ने देश्ववः स्वामः । ग्रवतः नेटः नटः त्रचेवः चतिः सुवः सुवः चर्चः सुवः त्यन ने देश्ववः स्वामः ।
- त प्राचनिर इराब्र में जुर्बे की स्राप्त देश हैं स्राप्त कर हैं का स्वर्म हैं स्राप्त कर है स

- ૹ૾૾૽૱ૢૹૣૣૣૣઌૹ.ઌઌૺઽૺ*ૢ*ૹૢ૿.ૹઌૹ.૨ૢઌૺ.ૹ૾૾ૢૼૢ૱ૢૹૢ૽૾ૹૢઌ૱ઌૢૢ૱ૹૢ૽ઌૹૺૺ૾ઌૹઌઌઌઌૺૺ૾૾ઌૺ૱ૹ૾૽ઌૹૺ

# **ૹૣ૽ૼૺૼૼૼૼૼૼૼૼૼૼૼૼૼૼૼૼૻ૽૾ૢૼઌૼૹ૽૾ૢૼઌૼૹઌૹ**ૢઌૹૢૺ

<u> বৃক্ত</u> বা	ষ্রবন্ধ:এমা	चतुत्र:धना:गडेना:त्र:कु:र्क्टॅ <b>र</b>	ब्रैंट.पर्वेश.के.कूरी
	শ্ৰথ ব্ৰহা	3	
र्रेस्य तचेला	ર્સેકું દ. ભૂ	2	Go
	গ্ৰুৰ'ল্বা	2	
<u> </u>	অশ্ব:বন্মীতা	3	
	<b>र्घे अर्हे</b> र्।	3	Go
र्श्वेदःर्कदायदियः देवायुः	<u>মূদধার্কুষাঞ্চ,ছু</u> ুুু	4	290

## रेनुःख्रेनःचनसःजया

# ग रुषःक्कुतःद्रञ्जेलैयःदरःय। श्रुरःद्यरःवेःवे। र्रेःकुरःवसायगुव्य। (५०%)

म्रीत्राच्या वित्राक्ष्या वित्राक्ष्या स्वार्थ स्वार्

৸য়৽ড়৴৽য়ৢ৽য়ৢ৾	श्रुणरु:ग्री:र्क्त्:ण्वी २०%
শৃশ্যুশ্	

শৃশ্বত্ব নুষ্ঠু বা শৃশ্বত্ব নুষ্ঠু বা	बीट.पर्जू.चश्चेतां (९%)	न्हेंन्न्ब (७%)	द्युर:रेबा (७%)	शैट.ष्रद्वेया.चक्रै.घटका(९%)
শুৰুষ্				
(अष्ट्र्या:श्रुर्ग)	शुरःषी'यहेंद्र'देंद्र'यदी'याश्रय 'देय'दे'ह्रे'	ब्रुंटःमी'तर्में'चर्डुत्'त व्राप्त्रक्ष'यर्दी'	सुटःमीःरेमःर्स्हेतसः८८ःतत्वेषःहेः सुट्रःसेसःर्स्हेतसः८८ःतत्वेषःहेः	શુ <sup>ન</sup> વી'વર્જન નેં વર્જ વર્જ વર્જ વર્જ કો' શુવા સે'ર્જ્
	५.म्.क्याननःमृ	ग्रवसासे ५ सासे ५ सु	'चर्गेर्'क्षेग्'त्यर्'बुगा (८)	र्श्वे.च.कु.धू.बा.धू.सु.यचैट.क्थ्रीबा
	<u>च</u> ्चश्रहे.प्ररीयी (९)	्यः के 'र्हे मा 'र्हे 'श्चे 'श्चे श्चे श्च तुमा (८)		य: यह मुन्त (८) य: यह सुन्त (८)
(ҲႤ)	शुरामी पर्हेर रेंब परी रे डेग म्बारा सेवा से खे	सुर-मी'यर्मे'मर्जुगमा यद्भै:घरम'यर्दै'	શુદ્ર-૧૬૧૧૬૧૧૬ ૧૬૬૧૧૩૬૧૧૬૧૧૬૧૧૧૧૧૧૧૧૧૧૧૧૧૧૧૧૧	ૹૢ૾ૢઽ૽ઌૢૼ૱ઌૢ૽ૺઌ૽૽૱૱૱૱ ૹૢ૽ઽઌૢ૽ૼ૱ઌૢ૽ૺઌૹૢ૾ઌઽ૽ૢ૾૽ઌૹૢૢ૱ૢ૽ૢૼૡૼ ૹૢ૽ઌૢ૽ૼ૱ઌ૽ૺઌ૽ૺ૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱૱
	२.म्.क्यानाना (४)	र्श्वे प्रतिः र्कें र सूर खाउँ	'र्भेन्'सुर	र्श्वे नितः र्ने ब त्युः
		'रे'वचुर'र्कुत्य'श्वे'र्चे	गडेग'रे'डेग'दर्हेंब'हे'दर्गा	म्बर्भः महिंद् केंद्रवें डिया केंद्र व
		य.वेगी (ग)	(u)	रुणा (३)
(दब्दैर्ग)	शुर्ना र्ने ब कब र र र खिया	श्रुट:मी:तर्गे:नर्जुगमा	ट.रेट.पद्यमान.र.पर्वेट.स्थ.क्ष्रुंपु.	श्रीट.ष्रह्मि.यर्डे.यर्डे.हेम्.शु.र्थ्
	चतिःचर्हेन्-र्नेब्र-म्बर्धाः देशः दे	दन्ने:घरशःदर्ने:	र्वे देश पर्ने ( घटका र्कु 'खा रें 'डेवा'	र्बे्रु न चुर र्षे ५ र ५ र
	'श्रेव'तररुगी (४)	ર્ફ્યું ન પેંડ્ય સે અ કે	बै'महुम'यश्व ( <b>८</b> )	श्रुरःमी'पञ्जूर'र्देब'यदी'म्बर्था
		শ. <i>ব</i> র্মা (৫)		रेवारी से पर्योत्र में से से तर हुना
				(4)
( <b>B</b> )	शुरःगै'मर्हेर'र्रेब'यर्दै'ग'डै'	शुर-मी'तर्मे'मर्द्ध्त'त	ब्रूट:मी:तचुट:देअ:र्कु:	สูราผธุสานผู้เฮรพาซิเรผิส
	ष्येव:वा	ੜ੍ਹੇ:ਬ <b>੨</b> མ੶	शुर-५८-तिष्य-नितःम्-५८४-र्सुः	बाहे राबेर यर रेखें र
	५.४.म्.भू.भू.क्ष्यम्बन्धम् (१)	वर्दे र्दरवर्दे चेरर्	बदःर्मेशःडेगाःर्गेदःर्देगःर्वेदःहेःच्चेश	च्चेश्राचलमा सुमा (१)
		মীর্নীবশা (রু)	(4)	

# प तत्त्रनःश्चरःचैःवै। श्चेःक्वःत्यमःत्रगुत्र। (४०%)

रट. मु. द्रमा खूंचकालका. मक्षर. मार्चेट्र. यचट्रेट्र. लूट्र. मार्चेट्र. मुच्या चुंच्या मुच्या चुंच्या क्ष्या मुच्या चुंच्या च

	শ্বুদাশ'শ্ৰী'ৰ্ক'ন্'শালী (৭০%)								
केश.	मिषः बिदान्नेष:५८:य। (१०%)					মঘদ: নৃথ্য- নৃষ্ট্ৰ: দ্বীনা (৩০%)			
<b>జ్</b> న్'									
Ŷ:Ą									
म्बद्धः									
শুব									
चे≉ा.	দর্মী.নর্থ	यईं र गावी	য়য়৾ৼৠৼ৾৾	र्क्रेग्'ग्वे'र्	দর্শী:নর্স্ত	म्हेर्यादी	ধর্ষীন শ্বুন।	र्क्रेग'गवि'५८'	
<b>ట్</b> న్'	শৃষ্ণ'ব্	(4%)	( <b>4%)</b>	ଜ୍ୱି:ସମ୍ବା	শৃষ্ণ'ব্	(4%)	(4%)	ଜି'ସଦ୍ଧା	
र्द्धेग	८:প€্র			(4%)	८:अह्ग			(4%)	
শ:শ্ৰু	.শর্ম্বী.ধ				.ঘশ্বি.ধ				
ন:গ্রী:	ฮุ ฮรผ				ฎี:घฺรผ				
<b>4</b> 5'	1				1				
মৃহ্য	(4%)				(4%)				
व्या									
(প্রস্ক্র	र्नेवःक्व	রেদ্রব:শ্রুব:	বেল্লব:শ্রুব:	तत्वनःशुरःमीः ह्रेमशःम	र्नेवःक्व	বেদ্রব:শ্রুব:	୯ଢିଅ:ସ୍ଲିମ:	तत्त्रनःश्रुदःगीःह्रेग्रन्थःग	
ग्रःशु	·55·a	गी'तर्गे'मर्डु	ี่ พิฮัราชูร	बि'के'कुर'मा'ने'से'र्थे५'	·55·a	गी'तर्गे'चर्डु	ทิ ผฮิ์ราฐร	बि'के'कुर'ग'रे'श्वे'र्थेर	
지)	দ্ৰীঅ'ব	ন্'বন্ধ্ৰ'দ্ৰদ	ॱ८८:५वृहःसे	इन्द्रगादःह्रेतःई:५ःर्ग	দ্ৰীঅ'ব	ন্ত্র প্রহ	'५५'५मुर'र्दे	इन्द्रगायः हैंतः द्वं कुं की	
	शुःगानुस	শবহী	ષ્યાર્સું તે રેયા	.ষ্ট্র.ट्र.पद्मेण.म्री.घचम्.	ही.बार्घ	শ্বন্	ષ્રાર્સુંદ્રે સ્થ	·ଞ୍ଚି·ମି·ୟ <u>ଗ</u> ୍ରିଲ-ଅକ୍ରି-ସମ୍କ	
	'ભુદ'ર્સ	ग्रवसःसेट्	श्चेमार्सुः येतः	रैग्'यहेंब्'हे'यहअहें	'ખેંટ.મું	ग्रवसःसेट्	श्चेग र्सु खेत	रैगा पहेंब हे पहला हैं	
	<b>२</b> ॱर्कु:इ		प्राम्ने मुग	८.१५.म्रे.धु.ध्यम्ब.४.४५८	<b>२</b> ॱर्कु:इ	শ্বস্থান	1	८.में.से.खे.घचस.यचर	
	<b>८४</b> १.हे.	'के'र्नेग'र्ने'श्चे	बुगा (४)	'वुगा (३)	<b>८४</b> १.हे.	'के'र्नेग'र्ने'श्चे	बुगा (१)	'ৰুশা	
	ধর্মব.	'শ্ৰীশ'ৰ্যুশা			ধর্ম্রব.	'च्चेर्थ'कुगा		(4)	
	शुरःगीः	(4)			शुरःगीः	(3)			
	双菱气:				五美子子				
	ब्रख्दी				ब्रख्दी				

	५.मू.स. इ.स. इ.स. इ.स. इ.स. इ.स. १.५ १.५ १.५ १.५ १.५ १.५ १.५ १.५ १.५ १.				५.मू.स. इं. इ इ इ इ इ इ इ इ इ इ इ इ इ इ इ इ इ			
(***	त्या मा भी प्राप्त मा भी	तत्त्वमःश्रुहः मिः ईवः क्वं इहः तत्त्वित्यः चत्तेः चर्हेदः र्वेवः मुश्रायः देत्यः देशेवः तद्	तत्त्वनःशुरः मी'अर्वेरःशुरः र्दःत्वचुरःदे अ'यर्गेद्श्वरः अ'यर्गेद्श्वरः स्थःकुं'अ'र्डेःके माओ'यहृयः	ने'त्रचेथ'मुःनगतःरथ	त्त्व म् त्र्यं त्र त्र्यं त्र्यं त्यं त्र्यं त्र्	तत्त्वमःश्रुद्रः मिःर्नेषः क्वं इतः तत्त्वित्यः चत्तेः चर्हेन् रेषः मध्यः देवः देवः देवे	प्राची (२.५) प्राचीत्रिक्षः भ्राक्षं अप्तीत्रिक्षः प्राचीत्रिक्षः प्राचीत्रिक्षः प्राचीत्रिक्षः प्राचीत्रिक्षः	क्रॅंत्'म्बि'कुर'गु'कैम' धश्चेत्'कुर'गु'कैम' दे'दब्वेध'कु'द्रमद'दध 'श्रेध'के'खु' ध'क्र'केम'खु'पम्म'न्द्र र'कुम्मि (४.५)
	지 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기	म्  (१.५)	(9.4)		지 (2·4)	म्  (१.५)		
(R) 51)	マロマ で で で で で で で で で で で で で	वह्यनःश्रुद्रः मीःचर्द्धेनःन्दे नःविदेःश्लेवःन । गःडेःश्लेवःन । गःडेःश्लेवःन । व्यापःश्रुद्धः	(१) प्राप्त क्षेत्र स्राप्त क्षेत्र स्र क्षेत	·	(9) (2) (1) (2) (2) (3) (4) (4) (5) (6) (7) (7) (7) (7) (7) (7) (7) (7	त्रष्ठ्वरः सुरः मे पर्हेर् रे न पर्डे खेन न म डे खेन च च च च च च च च च च च च च च च च च च च	यहा (१) मान्ने (१) मान्ने प्राप्ते मान्ने प्राप्ते मान्ने प्राप्ते	कुँतःमान्ने:कुरःगाःङेमः देःत्रञ्जेतःग्रुःरमातःस्य स्येतःवे:त्युःमाव्यस्य स्येतःवे:त्युःमाव्यस्य क्येत्रःत्युःमाव्यस्य कुमा (४)

(日)	ধর্মন.	বন্ধ্রন:শ্রুন:	মর্প্রন:মুন:মু	तत्वनःशुरःमीःह्र्तःमान	ধর্মন.	বন্ধন:শ্বুন:	মর্প্রন:মুন:ব্	तत्वनःशुरःमीःह्र्तःमान
	शुरामी	गै'गर्हेर'र्रे	દ.પ્વર્શ <del>ી</del> દ.મુજ		शुरामी	गै'वर्हेर'र्रे	<i>દ.</i> ૡઌ૽ૢ૿ૺ <i>દ.</i> ૠૢૹ	'र्र'त्रब्विथ'हे'र्गाद'र
	বর্গ নর্থ	<b>ৰ</b> 'ন্ব <del>্</del> বী'5্	. <u> </u>	ณ.ଖି.घ <mark>പ</mark> ्था.ग्री.ट्र्ये.सी.	বর্গ নর্থ	ब्रख्दी:५८:	. <u>48</u> .	ଘ'ଜି'ସସଶ'ग्ତି'ର୍ମିଶ'ଧ୍ୱ'
	শৃশ্ব	यर्दे बेर व	र्गे देशक्षे से	तर्दे र्दरत्दे चेरक्षण	শৃশ্যব	यर्दे बेर व	र्में देशक्षे अ	तर् <u>दे</u> द्रायदी चेरस मा
	রু.ষ<শ	दे गा दे प्य	ब्रःयरः	के'प्पर'मर्गोर'रे'सेक्'व	ฮู.ละฆ	दे गां दे प्य	ब्रःयरः	के'यम्'मर्गे <b>५</b> 'मे'सेक्'व
	'र्राधीद'	'ક્રેંફ તે' જે	না.ধর্ম্বন:শীব	रुषा (१.4)	'र्रुःश्रेद'	'ક્રેંફ વ'દ્દે 'એદ્દ	না.ধর্ম্বন:শ্রীন	<b>5</b> णा
	ন্ব ুশা	<b>त्रज्</b> या	ॱश्रेःचेशःतुगा		त्र <u>च</u> ्चा	<b>दर्गा</b>	ॱश्रेःचेशःबुगा	(g.y)
	(.u)	(y.y)	(. <b>u</b> )		(. <b>u</b> )	(g.u)	(. <b>u</b> )	

# म रुषः ह्यरः र्स्त्रेमा पह्नद्वर पर्वे स्रुव रायन रही से र्ववर रायन रम्या (४०%)

चहूर्र-पार्श्व, प्रवित्तः स्ट्र-इवा.लि.चार्श्व, द्वासान् भूच.तयर् ने. ट्वास्त्रः म्राचान्त्रं स्वासान् स्वास्त्रः स्वासान्त्रं स्वासान्त्यं स्वासान्त्रं स्वासान्त्रं स्वास्वास्यान्त्रं स्वासान्त्रं स

	श्लुगरु:ग्री:र्क <b>र</b> :गृदी (५०%)					
के≪.	बैदाबैश्वाद्या (१०%)	अवतः <u></u> र्धुरःर्डे:बैय (१०%)				
థ్న'						
ગું.ફું						
মৃহ্য						
'শ্বুত						
1						

.केश	र्म्युग'नहुद'ग्री'नई	মর্প্রহ:	বদ্ৰব:≹5	र्ह्ये केंग'८८'	र्म्मण'नकृष'ग्री'नर्हेर	মর্প্রহ:	বদ্রব:≹5	र्त्तुं केंग ५८ कुच हे
జ్్	५१५ (३%)	<b>মু</b> হ্	या	क्युनःहेवःश्रुवःक	'र्नेवा (५%)	<b>মু</b> হ'	শ	ब्रःक्षुब्रःक। (५%)
<b>ब्रिं</b> ग		(4%)	(4%)	(4%)		(4%)	(4%)	
₹1.								
शुघः								
গ্রী:ব								
<b>८.ब्रा</b>								
ইক								
1								
(ঝ	र्मे्ग्ग्यकृष्यदे	शुरःमी	तष्यनः हेर	र्त्ते:क्रॅग:क्रुच:वे:खु:	र्मे्ग्ग्निष्ण मह्नुद्रायदी	शुरःमी	तख्यः हेर	र्त्ते:क्रेंग:क्षुन:बे:खु:
र्ढेग्	ग्रवतः देरःगीः दुशः	মর্প্রহ:	त्र.क्र्.ग्रीश्र.	ष्यत्रे खेु चरे द्वा	गवतःर्नेरःगीःरुशःर	মর্প্রহ'	ন.ৰ্ফ্.মুশ্ৰ	ष्यत्रे खेु यदे द्वा
गुर	५८:पद्मिय:चदि:म	<del>ষু</del> ্-'	<b>ため.オと</b> 教	557	रःत्रद्येथःचदेःग्रव्	<del>ষু</del> ্হ'	<b>ため.メと</b> 数	557
1)	वरःर्ने वःगुरःगविः	र.पह्य	'বৃহ'র্ম্ব্রু'বা	শুদ্দী'অর্প্রদানুদ	र्देवःगुरःगविःचर्डेव	र.पह्य	'বৃহ'র্ষ্ট্র'ব'	शुरागी'अर्घेरासूरा
	वर्डेल:हें:	વ્ય: हे	के:र्नेग:र्ने:	५८:वर्षेण:हे:	·हे <sup>·</sup>	વ્ય: हे	के:र्नेग:र्ने:	८८.पह्यमा
	वर्हेन्'चुदै'र्नेब्'र्कु'	ガエ.傘	र्से ।	मुपःहेबःमुःक्षुबःकः	वर्हेन् चुवै र्ने बर्खु	ガエ.傘	्रें स्थ	म्वितः हेषः म्वीः श्रेषः कः
	गम्ययः देयः देः से से	≰1.∯.	বপ্তব্য:মূ	लट.सूर्यत.झे.पंडी	ग्रथा देया दे से से	≰1.∯.	বপ্তৰ পূৰ্	लट.सूर्यात.झे.पंडी
	ব্ৰ্যান্ত্ৰ্যা (ব্ৰু)	<b>इे</b> :सुर्	र सेर य	ณ.ชส์ใ.ช่อ2.5.	ব্যাশশা (র)	<b>इे</b> :सुर्	र:बेर्'य	๗:अघु५:दग५:र्
		ફુૈવ.ત્ર.	<b>국.</b> 석屆리.	दर्गा (४)		ફુૈવ.ત્ર.	<b>국.</b> 석屆리.	पर्वा (४)
		ञ्चे'यग	ङ्गेंब प्रच			ञ्चे'यग	ङ्गेंब प्रच	
		येद्र'द	·ધ્યા			ભેફ વ	(4)	
		ষ্বন:ধু	(4)			ষ্বন:ধু		
		শা				শা		
		(4)				(4)		
(*	र्म्मेण'चक्रुव'यर्दे'	शुरःगी	বন্ত্রব:স্ট্রব	र्त्ते:क्रेंग:श्लेय:वे:खु:	र्मेंग्नायक्रुवायदी	शुरःगी	বন্ত্রব:স্ট্রব্	र्त्तुं:क्रेंग'क्षुच'वे'खुं
٦)	ग्रवतःर्नेरःगीःरुषः	মর্প্রহ'	শশ্বর্স্ট র্ন	ष्णः चें न्दे ।त्यः देवाः दे	ग्रवतः देरः गीः दुशः द	মর্প্রহ'	শশ্বর্স্ট র্ন	ष्णः ई:रे:वा:देग्व:दे:
	<b>১৮.৫ট্রি</b> অ.মন্ত্র.মা	<del>ষু</del> ্-'	ग्रीशःर्श्चे.यः	55.	रःदिष्यःचदिःग्वर्	<del>ষু</del> ুুু '	ग्रीशःर्श्चे.यः	55.
	वर र्देव गुर ग्वे	र.पत्न	के:र्नेग:र्ने:	<u> มู</u> ราติ ผลัราชูรา	र्ने ब मुरम्म वि पर्के व	र.पत्न	के:र्नेग:र्ने:	สูราทิ'ผฮัราชูรา
	वर्डेवा हे : व्यूट	વ્ય: हे	বর্দ্রব:র্ড্	<u> ব্ৰহ্ম ব্ৰেথ</u> দু	'हे'र्थे५'रु	વ્ય: हे	বর্দ্রব:র্ড্	५८:५ष्ट्रीय:हे
	वर्हेर् छुद्धे र्रेब षा	ヹヹ.゚゚	5:35:	क्युन:हेब:ग्री:क्रुब:क:	नर्हेन्'चुदे'र्नेब्'ष्य'र्रे	ヹヹ.゚゚	5:35:	क्युन:हेब:क्यु:श्रुब:क:
		शःर्कुःम	বন্ত্রব:স্ট্রব			शःर्कुः≭	বন্ত্রব:স্ট্রব	

	र्डें रेग ग्रायय कर हो	지점'	শ-গুলীশ	ग्रुग'त्रचे्य'स्यु	.श्चा.चाद्यजा.क.झे.श	지점:	শ-গুমীশ	ग्रुग्।यत्रेण,श्रद्य
	'सेव'त्र्गा	व्यम् त्ये	বর্ষ:মূ	५ सेव पर्युगा	बःतर्जुगा( <sub>१.५</sub> )	व्यम् त्ये	বর্ষ:মূ	५:श्रेष्ठ:यतुगा
	(q.u)	ব্'বেঘ	र:बुर:धी	(1.4)		ब्र.पञ्च	र:बुर:धी	(1.4)
		य:बुगा	(વ.૫)			य:बुगा	(વ.૫)	
		(2.4)				(J.y)		
(ধর্ম	र्म्मेण'चक्रुब'यर्दे'	ガヹ.ぬ	तष्यनः हेर	र्त्तें केंग येत र्वेश ह्वे	र्मे्ग्ग्यकृष्यदे	<b>ガゼ.</b> 変	तत्त्रचः हेर	र्त्तें केंग येत में अप्ते
<b>57</b> )	ग्रवतःर्नेरःगीःरुषः	≰I.∯.	ম'শ্র্রি'র্ন	.श्रीच.भ.क्र्यंच.पार.	ग्रवतः देटः गीः दुशः च	≰I.∯.	ম'শ্র্রিউ'র্ন	.श्रीच.भ.क्री.धर.
	यश्रुव'गवर'र्नेव'	शुरःमी	<b>ব্</b> হ'বেল্ৰ্ব	शुर-मी'अर्घेट-सूट	श्रुवःगवदःर्देवःगुरः	शुरःमी	<b>ব্</b> হ'বেল্ৰ্ব	<u> </u>
	गुर-र्थे5 दुर	মর্প্রহ'	'झेंद्रय'ग	८८.यद्येज.धे.भैच.	र्थेन् सुर	মর্প্রহ'	'झेंद्रय'ग	५८:यद्येथ:हे:क्युय:
	वर्हेर् चुत्रे र्रेब	<b>মু</b> 5'5	র্থুঝ:শ্রীঝ:	हेव.मी.श्रेव.क.चरी	वर्हेर् चुते र्रेव	শ্বু হ'ব	প্রুম'শ্রীশ'	हेब'मी'स्रुब'क'गशु
	ग-डे-छोद-दा	र:प्रब्	বর্ষ্য:পূ	य.पत्रीज.भर्घेर.भ	ग-डे-छोद-दा	र:प्रब्	বর্ষ্য:মূ	প্র-দের্ল্রন্য-প্রস্থ
	५:म्.श्रुवीश्रान्य	ત્યઃકૃે	≭'થી	बःतर्जुगा	२.म्.श्र.क्यायात्र	ત્યઃ ફે	र थे।	बःदर्गा
	1 (4)	यग्राये	(4)	(9)	(4)	यगुःये	(4)	(9)
		ব্ৰ'বেঘ				ব্ৰ'বেঘ		
		यःक्षेःश्र				यःक्षेुःश्चे		
		ब.तर्				ब.तर्		
		শা				শা		
	25 9	(9)		250- 0	25 0	(9)		20- 0
(日)	म्यूग्पानह्रुव्यत्वरी	ガゼ.卑	तख्यः हेर	र्त्तुःळेगः ५गः ५गः न	र्म्मुण पहुत्र पर्दे	ガゼ.9	तख्यः हेर	र्त्तुः केषा ५ षा ५ षा ५
	ग्रवतःरेटःगीः दुशः	≱i.ર્થ્.	শশ্রেই বি	५८.ज्यं.स्यास्त्रःस्	ग्रवतः देरः गैः दुशः च	≱i.æ̃.	শশার্স্ট'র্ন	५८.ज्यं.स्यास्य
	पश्चुब् म्ब्यू र र्नेब	शुरःगीः	55.৫এব	य.भ.क्र्रीय.षर.स्रीट.	श्रुवःगवरःर्रेवःगुरः	शुर-भी	<u> </u>	च.भ.ष्ट्र्यं.षर.श्रुट.
	गुरःर्षेर्-दुरः	মর্ন্থই-	'झेंद्य'प	ที่ ผลักษุกร	र्षेत् :रुटः	মর্প্রহ'	'झेंद्रम'ष	ที่ ผลักษุรารุกา
	वर्हेर् चुति र्रे ब्राचेर	<i>মু</i> ্দ্	ব'নেমা'মা'	यद्येज.धे.भैच.धेय.	वर्हेर् छुद्धे र्रेब् बेर	<b>মু</b> ্ণ	ব'নেমা'মা'	यद्येषाः हे क्या हेवः
	-झूँब-बै-श्रेब-पर्नुगा	ट.पत्न	र'मीश'व	শ্রী-মুব্-ক'শ্বতীশ্র	क्ट्रॅब के खेब पर तुगा	र.पत्न	र'गैश'त	শ্রী-শ্কুর-ক্র-শাত্তিশা-অ
	(g.y)	વ્ય:हे:એ	र्घशःभूर.	ন্দ্রেণ্ডামন্ত্র্	(g.y)	વ્ય:हे:એ	र्घशःभूर.	८.पर्चेल.भर्घेर.शु
		<b>व</b> .त्र±.	बुर-धी	ब्र.प्रज्ञा (.4)		<b>व.</b> त्र≾.	बुर-धी	व.पर्वमा
		ग्रायर्झ	(9.4)			ग्रायर्झ	(g.y)	(. <b>u</b> )
		고.ᆁ고.				고.ᆁ고.		
		\$3.				\$.		
		यम्य				त्यम् त्ये		

ब्र'व्य	ब्र'तव
नःदुगा	यः तुमा
(.u)	(.u)

## ८ वि.चनरे.मुं.ची ट्रंमिट.जन्न.पंबीली (२५%)

ঐশ:ৰ্ভ্ব'শ্ৰী		भ्रुगरुःर्ग्यन्। (१५%)					
র্ষ্টুনাশ:শ্রুবা		•					
ঀ৾য়৽ড়৾৾ঀ৽ড়ৢ৾	न्द्रें देव।(७%)	गुर्रे5् अर्ळअश	म्नुद:र्क्टगा (८%)	दच्चेत्य:महुम			
মাধ্য:মীব:মী.		(4%)		শ্ (৭%)			
ব্দ:শৃশ্বশ্ব							
(अर्क्चेग्'गुर्	ાય. વર્ષન મુદ્યો. ભૌખા ટીયા. થીયા. વર્ષા પ્રાથમિત માન	দ্র'বপ্র',ব্র'রেট্র	वि'चत्र्र' द्राचसूत्र' यदे 'सेट' स्वा' मी 'घ' सू	श्चीयः हेवः र्ष्ट्रवाः			
)	स्व हे त्य प्रत र की याव द देव स्व स्व	વ્ય: ફે.	५'ग्रबस्य'५८'श्ले५'धिया'यी'केया'याबी'स्त्र	अधुवं पर्गोद् खु			
	र्वेतःर्हेगःर्हे भुः चर्गेदःदे १५८५ ॥ (७)	चठर ख़ूग सेवाया	शुवार्ट्यम्यार्नेमार्ने से से से स्वर्मा (५)	ण (४)			
		557					
		র্ক্টবা'মর্ক্রমশা					
		ঘট্র্ব অর্চমশ					
		र्ने ब स्वर्धकार्यः					
		র্থুতা.পরিথ.ধ্রী.রাধা.					
		बुगा (३)					

(スワ)	वि'चन्द्र'ग्री'सुव्य'तुष्य'दिष्ठेव'हे'स्प्रेट्'रुट्	দ্র-বর্মবৃ-, বৃ-র-রেট্র	ष.चत्रन.ग्री.श्रट.कृष.ग्री.घ.श्रूट.ग्रश्रट.ग्र	मितः हेवः र्ष्णः
	ग्रद्र-र्देद्र-द्र-स्थायद्वियान्वतःषान्वदःष	व्यःचड्ड स्थ्रुगः सेवः	५:रु-भ्रदःभेदःधेनाःनीःकैनाःनालीःदेःकैनाःसुदःसु	পরিব.শ্ব.স্থ্র.
	·र्डं :दे : तर्मा (u)	ब्राङ्मेःर्षेत्रः दुरः।	बःर्केंतःर्हेगःर्हे अवःतर्गा (८.५)	यर्गे5्दुग
		क्रॅग्'यक्रैश'यर्हेर्'		(g.y)
		মঙ্কুশা		
		र्देय.बष्ट्रश्य.क्रें.ब्र.क्र.क्र.		
		रे र्कुण सम्बुद सेद		
		बुगा (५.५)		
(বন্ধীন্য)	ष्यम् प्रम्	चरुन् श्रुगः श्रेतः अ <sup>.</sup>	षःचत्रद्रान्धेःश्चेदःक्षेषाःषीःष्टरङ्गद्राम्बरस्यःषाः	मीतः ध्रेषः र्ष्णः
	म्री.योष्ट्रं अ.क्षेट्य.प्रमुल.स्ट्रं	८८:कुर्वे. अष्टु.	र्डं ने प्यें न रहुन स्नून प्येग मी किंग माने प्यन ने	পর্ব বের্র শেষ্ট্র
	गद्र-१र्देदाये:4.ड्रिग:र-अर्थ्या:यश	নই্ব্'অর্চ্চঅম্যা	'ङेग'सेद'पर्या (८)	'चर्गे ५'खुग
	(6)	र्ने ब'यकेषामान्द्रिः		(2)
		४८.क्षैज.भर्घेथ.स्रु.		
		भेदः तर्मा (४)		
(国)	ायःचत्रन् प्रदे 'स्याः म्रीः मात्रकाः श्रेटकः प्	चठर ख़ूग ख़ेताखा	षःचत्रदःश्चेःसेदःक्षेषाःषोःघःस्नृदःष्वस्यःके	क्य-हेब-र्ख्ब.
	दर्षेण: <del>र</del> ूट:	८८:कुर्वा.सकुरा.	मा'सेन्'मदि'।यर'	পর্যথ ম.খ.স্র
	गदर दें द गुर संग रम। (३)	নই্ব'অর্চ্চঅম্যা	भूर्'भेग'गे'र्केग'गवि'सर'सेद'यर्गा	चर्गे5:बुग
		र्नेत्र यर्कसम्पर्कुः	(વ્.૫)	(. <b>u</b> )
		वन्ने देवे देव देवा स्वा		
		र-भेव-वर्गा		
		(9.4)		

## उ पद्मे र्ड्स द्मे दी र्र मुर प्यम प्रमुवा (१५%)

બીર-કુનાન્ના ધ્રી. તેવાના કુનાના તાલું કુના તાલું કુનાના તાલું કુના તાલું કુનાના તાલું કુના તાલું કુનાના તાલું કુના તાલું કુના

मेश.क्र्य.जी.क्रु	श्चुग्राश्च र् ज्यादी (१५%)					
নৃষ্ণ-শ্ৰুবা	र्देःश्चेंद्र'द्रद'सहुग'चक्षु।(4%)	ग्वर-र्देव-५८-दिव्य-सुर-देग	धिगार्श्वेुर। (4%)	শুর্হুই-অর্ক্রমনা		
शःश्रुपःग्रीःदरः	G.	य। (७%)		(4%)		
गुरुषा						
(अर्क्रुग्यःशुर्रा)	र्नेबर्क्बरचीःक्च्चराष्ट्रस्यर्देःर्बेन्रन्दर्गमाःस्चुनःचीः	तज्ञे:र्डेब:पर्दे.	लु.बीयु.ब्रूर.च.ष्	কুনা.পত্ৰপ্ৰশা		
	पञ्जन पुरे पार्ट्स के अहमा प्रमुख्य विकास की अर्के मा मु	र्नेबर्कबर्द्रप्यविषर्भेबर्म	वर्हें वस से इ सर	ঘটুই.প্রক্রপ্রধা		
	रःश्चे पर्गे प्रुषा (४)	<b>र्यः देते</b> त्युद्यः म्वा चटः प्येत्यः यः र्व	ञ्चेश्रः बुगा	র্ব্ব অর্চ্চমশর্ট্র		
		5	(4)	'चलग'र्स्ट्रे'		
		रमेःगहसःसुरःदेतःसःसङ्		র্কুণ:মন্থব,ট্রুনা.		
		गानर्गोर्-रे-धेर्-क्रेश-वर्डेन्स्य		र्ने श्रे		
		म्नु:च्रेस:बुगा (७)		ञ्चेशःसुगा (३)		
(スワ)	र्नेबर्क्वरग्री:क्रुचराष्ट्रकार्टर्श्वेन् रन्दरन्त्रमार्श्चुचरन	त्र <u>च</u> ीः र्ह्रें बार्ये ने	लु.बीयु.ब्री्रूर.च.ष्	কুনা.পক্পপ্রা		
	ब्रेट्र पहें बरे, अहंबी पर्से बर्स क्र्	र्नेबर्कबर्द्रप्यविषर्भेबर्म	षार्ड ने तर्हे वा है ने	ঘট্ন্ অর্ক্রম্যা		
	रवःमात्यःश्चेःचर्गिद् खुगा (४.५)	<b>र्यः देते</b> सुरुषः म्वा चरः पेर्द्रभः स	र्यातुमा (४.५)	র্ব্ব অর্চ্চমশর্ট্র		
		५. रमःगिरुषाः सरः स्पः		•		
		चलि'ने'डैग'चर्गेन्'ने'भैन'ळेख'		षार्चे मे तर्हेवा		
		तर्देरमयःस्रे:वैसःतुगा (u)		हें. इसात्रुगा		
				(વ.૫)		
(ਖੜ੍ਹੇਨਾ)	र्नेबर्क्वरचीःक्च्यराष्ट्रस्यर्देःर्बेन्रन्दर्गमाःस्चुनःचीः	त्र <u>च</u> ीः र्हें बार्क्	धी:मुदी:र्श्वेर:पार्कु:	র্কুনা.প্রক্রপ্রধা		
	पञ्जन र्ने ब प्रमें ब रहे । बहुना पश्च प्रमाय से प्रम से प्रमाय से प्रम से प्रमाय से प्रम से प्रमाय से प्र	र्नेवःक्वः५८:प्रत्रियःर्नेवःसर्वेशः	णे.च.पहूजा.चे.चे.	নৰ্ছিব্'অৰ্চ্চঅশ্য		
	पर्वा (४)	देव:पिटशःग्राचर:पूरं.सैटः	तुगा (४)	র্ব্ব অর্চ্চরশ্বর্		
		रमे.चानुबाखुराद्भेतार्सुः वाशुवा		•		
		यशनर्गेित् ने से त त्रुगा (८)		ग्रे.भ.पहूर्ण.धे.		
				ञ्चेश्रःसुगा (४)		

(周)	र्देबरक्ष्यकुत्रकुत्राखुद्रबर्ग्टर्श्चेद्राद्रदर्गमाञ्चुत्राकुर	यञ्चे:र्र्डेब:यर्ने:र्नेब:र्कब: <u>५</u> ८:यञ्चे	धै'गुदे'र्श्वेर'न"र्सु	ফুনা.পত্রপ্রধা
	पर्देर.श्रह्मा.पर्दे.घटश.घ.ष.णश.शुष.पर्देगी	त्र.	ग्रवसासे ५ सासे ५	নাই্ব'অর্চ্চমশা
	(9.4)	र्देव'बळॅब'सेते'तुरब'ख'र्ड'से'	पहूजामें मुंबा वेंगी	र्ने ब'यर्कयय्यः र्कु
		ग्रबर:बुगा	(g.y)	•
		<b>५</b> ये गहुमासुर देत थट		ग्रवसःसेर्'सः
		ग्रुचारायसान्त्रग्रीन् ने स्रीत्रायनुग		बेर पर्हेण हे च
		[ (4)		र्थ.वैग्री (२.५)

## क कूर्यन्न क्यान (२०%)

र्द्धनायात्त्रपुर, योष्ट्रपुर्ध्व, योट्रपुर, योज्ञ्चन, श्रींचा, जायात्त्रपुर, योज्ञ्चन, युन्न, योज्ञ्चन, योज्ञ त्या, जायात्त्रपुर, योष्ट्रपुर, याद्य, श्रींचा, जाया, याप्ट्रपुर, योज्ञ्च, याप्ट्रपुर, योज्ञ्च, याप्ट्रपुर, याद्य, योज्ञ्च, याप्ट्रपुर, योज्ञ्च, याप्ट्रपुर, याप्ट् याप्ट्रपुर, याप्ट

ঀ৾য়৽ড়৾৾ৼ৽য়ৢ৽য়ৢ৾৽য়		श्रुया≈ाः क्	ोःर्कर्भवी (१०%)	
शःगुरा		•		
चेश्व.क्ट्रीब्रब्य	<b>新</b> 万'৺ग'万5'差万'到	র্ষ্রনাম ক্রন্ম মা	শ্বদু:শ্রী:শ্বদ্	क्रुयःवश्चुरः५८ःर्श्वेचश्यःय। (५%)
शुचाग्री:दटःमधे	(4%)	(4%)	(4%)	
व्य				
(अर्कूग्राःश्चर)	र्नेबःक्बर-५८:यद्येयःहेः	ग्रह्मयःयम्	শৃষ্ণ ন্দ্ৰ শূটা শ্ৰ	ग्राञ्चग्रथःग्री:क्रुअ:दशुर-१८-१र्त्तु:र्श्वेयशः १४
	<b>अ</b> न् :धेम् :मी:श्रेन् :क्रम् :थम्:	८८:ह्यम्ब.क्यम्ब.जूट.	<u> র'শ্'ব্র'রেট্রথ'</u> ন্ট'	तःसःबुसःसेर् स्यरःग्रम्भयःचम्रदःत्वर् र्षे
	वेब ५५ में ५ में ५ में ५ में ५ में ५	지 (3)	<b>২</b> 5'বৰীৰ'শ্ৰী'শ্লী'	51 (4)
	'श्चे' श्चुब'लु'ङे'सुन'ध्चेब'या		श्रेर:सय:अर्क्चेग:ग्रुर।	
	(3)		(4)	
(スワ)	র্ব্বর্জব্বব্দের্ম্বর্মণ্ট	মাপতা.ব'ধই জিব জুব.	শৃষ্ণ ন্দ্ৰপূত্	ग्राञ्चग्रथःग्री:क्रुअ:दशुर-१८-१र्त्तु:र्श्वेनश्व:लुअ
	<b>अ</b> ट्र.लुबा.बी.श्रट.क्ट्रबा.लबा.	८८:व्र्याश.क्याश.ब्रुट:र्ड	५ॱग्'५८ॱदब्विथःहे	·र्डबःम्चुःम्बर्धःम्पन् ःतनन् ःर्धेन्। (१.५)
	वेब ५५ में ५ में ५ में ५ में ५ में ५	આ ( <b>૧.૫</b> )	ररःचलेबःग्रेःभ्रुरःग्रेः	
	'श्चे' श्चुव'लु'रूण (१. <sub>५</sub> )		श्रेट:स्व:स्व (४.५)	

(दच्चैरा)	र्देब:र्कब:५८:प्रख्रीय:हे:	শ্বশ শব্দ শুন শ্বিন	শৃষ্ণ ন্দ্ৰপূৰ্	ग्राञ्चग्रथःग्री:इस्रायग्रुर:५८:र्त्नु:र्स्यय्यःग्रटः
	अन् रधिया यी अन् रक्षेया त्यया	<i>ব্</i> ন:র্প্রকাশ-ক্র'না	५ॱग्ॱ५८ॱवष्डिवः हे	र्दर:बी:र्नयर:खेंश:बी:बाश्रय:चन्दर:
	वेब:५८:ई५:अ:५ग:ईग:ई	(9)	<b>২</b> 5'য়ঀ৾ঀ'য়ৢ৾'য়ৢ৾৾৾৾	र्षेत्र (१)
	.म्रे. श्रुव.खं.पत्र्ट्टा (४)		श्रेरःययःर्धेर् स्रेर् र्	
			মা (ব)	
( <b>ਸ਼</b> )	र्देब:र्कब:५८:प्रख्रीय:हे:	শ্বশ্ব ন্মন শ্বন শ্বন	শৃষ্ণ ন্দ্ৰপূত্ৰ শূত্ৰী শ্ৰ	ग्रुग्रथ'ग्रुं क्रथ'त्रशुर'र्ट र्त्तुं र्से्ट्रय्थ'ग्रु
	अन् रधिया यी अन् रक्षेया त्यया	<i>ব্</i> ন:র্প্রযাশ:ক্রম	५ॱग्ॱ५८ॱवष्डिवः हे	<b>अ'गा'</b> न्यत'त्रुअ'ग्री'ग्रायय'न्यन्'त्वन्'र्थे
	व्येष: ५८: ई५: ञ्च: ५ गः हें गः हें	के'य। (.y)	ररःचलेबःग्रेःभ्रुरःग्रेः	5/ (.u)
	.म्रे. श्रैय.खे.घ.था (५.५)		শ্বন্ধন:ম্বন্ধ:শাই	
			म्। (१.५)	

# न्वेःवैपःवययःययः प्रम्पः वृत्रः क्ष्रां प्रमान् रहेषा

ঘ্রবশ্ব:এমা	<b>ମ୍</b> ଞି'ଜ୍ୱିସ'ଅି'ମ୍ଞି'ସା	गुरुष'या	শ্বীনাধ্য.গ্রী.বাশ্বী.ছা
	ग र्श्नुर:यद्भैत:४व:गशुम	2	30
	प प्रविनःश्रुरः चैः वै।	2	30
रुषःक्रुवः५ग्रेःवैय।	च व.चनर.पत्रु.श्चन.४४.चश्चा	2	24
	८ यम्रे र्डेग में दी	2	<i>9</i> 4
	ठ र्त्त्रिम्' घुट पर्वे सुव	2	30
	क गुरुष:च,वृत्र:गृहर:दे।	2	20
	लूंट्य.	<u></u> শূঁআ	100

**र्ह्रव्रक्टा** ह्रिटाया:वेशःल्व्यायद्यी:स्रव्या LAC101

# **ब**रःर्नेबा

ईंबर-रेगा ผพ.ซุช.22.ก

१.१ ईंबर-देगांगेः हुँ। र्नेता १.२ ईंबर-देगा

१.२.१ ध्विर पहरणे ईंबर रेगा

# ૧.૧.૧ ક્રિંય રેગ માં ક્રિંવ સેવા ૧.૨ ર્કે અ રેગ માં ક્રિંવ સેવા

# অম.ক্থ.মাইশ্রুমা স্থুমা

१.१ धुर पहर सुर में धुर में

१.१ शुरामी खुराइस प्राप्त राष्ट्रीय

४.४ शुरामी नहें र रेंबा

१.८ शुर से प्यते पर्यो र रेश

४.५ शुरः हेर् म्यते चुः तगुवा

४.७ शुरःमी'माद्रशःसुरश

४.७ शुरागी'तमुरादेश

४.५ शुरःग्रचरः ईंबा

## त्रशःक्ष्यः योश्वेशः म्। यत्त्रचः श्वेरः यञ्चे : घरम्।

द्रः वष्ट्रनः सूरः में रें र्ह्वेत्।

४.१.१ र्ह्मेश्यामः तत्वनः सूर्

४.१.१ मूँग'चहुद'दख्च'सूर'।

<sub>४.१</sub> ग्रदारेन्यस्य सुरः मे पर्हेन्या स्था

## ४.४ तत्त्र सूर मी क मुन्

य.य.१ अर्घेट:सूट:वर्गे:नर्हेर्

४.४.४ चु.प्रगीण/अर्घूर.क्रैर.प्रगुण.यथेरी

4.4.4 तत्वन: हेन्:यते: बेन्।

इ.इ.८ र्ज्ञें किंगा

इ.८ तत्त्र सूर म्यूर म्यूर

## लश्रक्ष पत्रिया मूर्मिया मुर्

८.७ र्त्तेषा पङ्ग व स्त्री प्राप्त देश

श्र्वणाष्ट्ररामी'ख्राक्र्याप्रराम्बेग्या

८.व र्त्ते मूर्याप्तह्रव मुः न्रेम्यापान न न न न म्रेस्य म्यार्वेन

- <u>... र्</u>त्रीग'नह्रद'ची'नर्गिन'र्नेग'नेअ'र्सेगा
- e.u र्म्मिण: हुर: ग्रूबा

## जन्म.क्ष्य.क्र.मा क्षेय.क्र्या

- ५.७ ध्वीर प्राप्त हैं अ खे रें भें न
- 4.9 M'7951
- प.य र्ह्ने बे
- ५.६ इंट'र्से
- ૫.૫ 5કે માંડ્યા
- ५.७ क्षुवःईवाःग्रच्यःईवा

# जन्मःक्ष-चुणाना यह्यः हुना

- ७.७ वडी ईंब छी रें हैंना
- ७.१ वर्षे र्डेंब मुः पर्मे ५ रेब
- ৫.৫ বন্ধী ট্রিমাবন্ধী দ্বদ্ধা
  - ७.३.७ रें ब्रेंन् तड़ी घटका
  - ७.इ.१ नरःश्चैःग्वर् रेत्रायञ्चेः घरम्
  - ৫.ব.ব পর্বান্ধুরের্'ব্রম্
  - ५.६ यञ्चीः ईसाम्बर्गः ईस्

## यस.क्षेत्र.चर्चेत्र.ची क्रूबास.चर्चेटी

- a.9 र्केंग्य प्रत्न हीं र्ने ब्रा
- ৯.৫ র্কুমধ্যমধ্য শ্রী প্রী বা
- ग.न कूर्यायात्रचिर प्रीयायायात्रीया
- ग.८ कूर्यस.चन्द्र.धीयास.लट्सा
- ৶.৻৻ র্কুনাঝ-বন্ধ-নার্ক্ত-রাম্পান্তম-ন্থা-রা
- ข.ผ ชั้งสาราคุราฐราว

## **झुग**'न्र्क्ने'सदी'न्धे'र्झे

## देशयर रु ख़ूग रु में यदि रु में खें।

गुर्वाचन्द्रम् हि। (१०११) **र्त्वाचानुराद्वित्रम् वर्ष्वा** वर्ष्वा वर्षा वर्ष्वा वर्षा वर्

म्पर्निश्चर्यात्त्रं (१०००) **क्रूचिश्चर्यात्रं विद्यां क्ष्यं विद्यां विद्यां** 

## षःश्लेरःध्रुगः दर्गे यदे द्ये र्घे

श्चें केंगः श्चें त्रां १०१५

## Year 2 Modules

## MAC201 Communication in the Digital World (Social Media Ecosystem)

Module Code and Title: MAC201 Communication in the Digital World

(Social Media Ecosystem)

**Programme:** Bachelor of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Anju Chhetri and Sangay Lhaden

Module Coordinator: Sherubtse College

#### **General Objective**

This module will provide students with a comprehensive understanding of the various components that make up the social media landscape, including social media platforms, content creation, communication tools, and social media strategies. Students will also learn to use the communication tools to create brand awareness, customer

engagement, influencer marketing, sales and conversions and conduct market research. Along with theoretical understanding, a large part of this module is practice based to provide hands on experience on effective use of social media applications for various purposes.

## **Learning Outcomes**

On completion of the module, students will be able to:

- 1. analyse the importance of social media and its application today
- 2. explain the impact of social media marketing on marketers and consumers
- 3. explore the concept of influencer culture and its potential
- 4. explain the importance of social media strategy
- 5. identify different types of strategies used
- 6. create a social media strategy for business idea
- 7. develop SMART Goals
- 8. create content for social media platforms for various purposes.
- 9. identify different content management systems
- 10. use open-source social media management tools
- 11. create content schedules
- 12. explain the importance of social media marketing
- 13. examine the role of SEO for social media

## **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours
	Facilitation and discussion	1	
Contact	Practical exercises	1.5	60
Contact	Group work	0.5	60
	Creative presentation	1	
	Project work	1.5	
Independent study	Assignment/field work	1.5	60
otday	Self-study	1	
	Total	8	120

#### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

## a. Report Writing (10%)

Students will write a report of 1000 words providing an overview of the social media ecosystem, including its history, current state, and future prospects. The report will examine the key players in the ecosystem, the different types of social media platforms, and the impact of social media on society and the economy. This assignment will allow students to understand social media beyond lay user knowledge and apply the understanding in approaching future assessments. The report will assess the learning outcomes 1, 2 and 3.

#### **Report Writing Assessment Criteria**

5 marks Content: Clear and accurate description of the social media ecosystem.

3 marks Analysis: Demonstrates critical thinking and in-depth evaluation of social media's impact.
 1 mark Use of Relevant Literature: Incorporates substantial and credible academic sources.
 1 mark Grammar & Referencing: Proper language, structure, and citation style

#### b. Social media Strategy (20%)

Through this assignment, students will be able to explore different social media strategies. Students will be required to formulate a business idea and employ specific social media strategy. Starting from creating the goals, mission and vision, they are also required to develop customer persona. It will also foster the student's ability to choose the appropriate platform for the business idea. The strategy report will assess the learning outcome 4, 5 and 6.

#### **Social Media Strategy Assessment Criteria**

- 4 marks Quality of Business Ideation: Clear, innovative, and relevant to social media trends, demonstrating feasibility and strategic thinking.
- 4 marks Quality of Goals: Well-defined, measurable, and aligned with the business idea and social media strategy.
- 4 marks Quality of Mission and Vision: Clearly defines the business purpose, and the vision is forward-looking and strategic.
- 4 marks Accurate Customer Persona: Persona is detailed, realistic, and well-supported by research, accurately representing the target audience.
- 4 marks Platform Selection and Justification: Social media platform(s) align with the business goals and target audience, with a strong justification for effectiveness.

## c. Creative Content Design (30%)

This assignment will enable students to showcase their creativity and design skills in creating compelling and visually appealing content for various media platforms. They will have the opportunity to demonstrate your ability to conceptualise, plan, and execute creative content that engages and resonates with the target audience. The creative content will assess the learning outcome 7, 8 and 9.

### **Creative Content Design Assessment Criteria**

- 5 marks Creativity and Originality: Demonstrates unique and innovative ideas that effectively capture attention and stand out.
- 5 marks Effectiveness of Message: Clear, engaging, and aligned with the target audience and platform.
- 5 marks Visual Appeal and Coherence: Aesthetically pleasing, well-structured, and maintains consistency across elements.
- 5 marks Use of Relevant Text, Images, and Other Visual Elements: Selection and integration of text, images, and multimedia enhance the content's impact and effectiveness.
- 5 marks Application of Design Principles: Effective use of color theory, typography, and layout to enhance readability and visual hierarchy.
- 5 marks Overall Quality: Well-organized, professionally presented, and includes a thoughtful written reflection.

#### d. Social Media Marketing Project (40%)

This assignment is a group project on Social Media Marketing, where students will collaborate to develop a comprehensive strategy for a hypothetical or real client, focusing on clear objectives, content creation, and engagement tactics across various platforms. students will continually refine our approach, possibly incorporating advertising if feasible, and ultimately be able to launch social media campaigns. The assignment will assess the learning outcome 10,11,12 and 13.

#### Social media Marketing Project Assessment Criteria

- 6 marks Research and Evidence: Well-researched, supported by credible data, industry insights, and case studies.
- 6 marks Clear Objectives: Specific, measurable, achievable, relevant, and time-bound (SMART), aligning with the client's needs.
- 8 marks Engaging Content: Content is creative, audience-focused, and optimized for different social media platforms.
- 10 marks Appropriate Use of Strategy: Effectively integrates organic and paid approaches, audience targeting, and platform selection.
- 10 marks Overall Quality of Campaign Launch: Well-executed, demonstrating strong planning, implementation, and adaptability based on feedback.

#### Overview of the assessment approaches and weighting

Continuous assessment	Areas	Areas of assignments		Weighting (%)
A (Theory)	a. I	Report Writing	1	10
B (Practical)	b. \$	Social Media Strategy	1	20
	с. (	Creative Content design	1	30
	d. I	Marketing Project	1	40
Total			100	

#### Pre-requisites: None

#### Unit I: Introduction to Social Media

- 1.1. Definition and Types of Social Media
  - 1.1.1. Social media definition, types, and uses
  - 1.1.2. Overview of major social media platforms (Facebook, Twitter, Instagram, LinkedIn, TikTok, etc.)
- 1.2. Changes in Communication Patterns
  - 1.2.1. Social media vs. traditional media
  - 1.2.2. Role of social media in personal and professional networking
  - 1.2.3. Definition and scope of social media marketing
- 1.3. Impact on Marketers
  - 1.3.1. Enhanced reach and targeting capabilities
  - 1.3.2. Cost-effectiveness of social media campaigns
  - 1.3.3. Real-time engagement and customer interaction
  - 1.3.4. Data analytics and insights for better decision-making
  - 1.3.5. Case studies of successful social media marketing campaigns
- 1.4. Impact on Consumers
  - 1.4.1. Increased access to product information and reviews
  - 1.4.2. Personalized marketing and consumer experience
  - 1.4.3. Influence of social proof and peer recommendations
  - 1.4.4. Role of influencers in shaping consumer preferences

- 1.4.5. Changes in consumer expectations and behavior
- 1.5. Influencer Culture
  - 1.5.1. Definition and history of influencer culture
  - 1.5.2. Evolution from traditional celebrity endorsements to social media influencers
  - 1.5.3. Overview of different types of influencers (mega, macro, micro, and nano influencers)
- 1.6. Personal and Business Social Media
  - 1.6.1. Personal social media definition, characteristics, content strategies, goals, and privacy concerns
  - 1.6.2. Business social media definition, characteristics, content strategies, goals, and case studies
- 1.7. Business Applications of Social Media
  - 1.7.1. Marketing and advertising
  - 1.7.2. Customer engagement and relationship building
  - 1.7.3. Brand awareness and reputation management
  - 1.7.4. Sales and lead generation
  - 1.7.5. Customer support and feedback
- 1.8. Platform-Specific Strategies
  - 1.8.1. Facebook advertising, community building, event promotion
  - 1.8.2. Instagram visual branding, influencer collaborations, shopping features
  - 1.8.3. Twitter real-time engagement, customer service, trend monitoring
  - 1.8.4. LinkedIn professional networking, B2B marketing, thought leadership
  - 1.8.5. TikTok viral marketing, short-form video content, trends

#### **Unit II: Social Media Strategy**

- 2.1. Defining Social Media Strategy and SMART Goals
  - 2.1.1. Definition of SMART goals and their importance in social media strategy
- 2.2. Key Social Media Strategies
  - 2.2.1. Brand awareness and reputation management
  - 2.2.2. Content marketing and engagement strategy
  - 2.2.3. Lead generation and customer service strategy
  - 2.2.4. Sales and influencer marketing
  - 2.2.5. Community building and crisis management
  - 2.2.6. Personal branding and event promotion
- 2.3. Benefits of Social Media Strategy
  - 2.3.1. Expanded reach and audience growth
  - 2.3.2. Increased credibility and trust
  - 2.3.3. Content enrichment and resource sharing
  - 2.3.4. Strategic alignment and goal achievement
  - 2.3.5. Crisis management and market expansion
- 2.4. Customer Persona Development
  - 2.4.1. Definition and purpose of customer personas
  - 2.4.2. Data collection and segmentation
  - 2.4.3. Creating detailed customer profiles
- 2.5. Steps to Developing a Social Media Strategy
  - 2.5.1. Define business goals and understand the target audience
  - 2.5.2. Choose the right social media platforms
  - 2.5.3. Develop content and engagement strategies
  - 2.5.4. Plan influencer partnerships and advertising
  - 2.5.5. Implement monitoring and analytics

### **Unit III: Content Creation for Social Media**

- 3.1. Introduction to Content Creation
  - 3.1.1. Importance of content in social media marketing

- 3.1.2. Defining format, style, tone, and voice
- 3.2. Creating Engaging Content
  - 3.2.1. Identifying and resonating with target audiences
  - 3.2.2. Designing visually appealing and compelling content
  - 3.2.3. Video marketing and audience research techniques
- 3.3. Content Management Systems (CMS)
  - 3.3.1. Definition and purpose of CMS
  - 3.3.2. Overview of popular CMS platforms (WordPress, Joomla, Drupal)
  - 3.3.3. Choosing the right CMS based on features and scalability
- 3.4. Project Management Tools for Content Workflow
  - 3.4.1. Overview of tools such as Asana, Trello, Monday.com, and ClickUp

#### **Unit IV: Social Media Management**

- 4.1. Social Media Management Tools
  - 4.1.1. Popular tools like Hootsuite, Buffer, Sprout Social, and Later
  - 4.1.2. Open-source social media management tools (e.g., Mastodon, Buffer's open-source projects)
- 4.2. Content Scheduling and Planning
  - 4.2.1. Importance of content scheduling
  - 4.2.2. Creating an effective content calendar

#### **Unit V: Marketing for Social Media**

- 5.1. Importance of Social Media Marketing
  - 5.1.1. Role of social media in modern marketing
  - 5.1.2. Comparison of social media marketing vs. traditional marketing
- 5.2. Digital Marketing Funnels
  - 5.2.1. Definition and stages (awareness, consideration, decision, retention)
  - 5.2.2. Importance of each stage in the customer journey
  - 5.2.3. Optimizing digital marketing funnels for better performance
- 5.3. Social Media Advertising
  - 5.3.1. Types of social media ads (image ads, video ads, carousel ads)
  - 5.3.2. Ad targeting and audience segmentation
- 5.4. Role of SEO in Social Media Marketing
  - 5.4.1. Importance of keywords, hashtags, and link-building
  - 5.4.2. SEO best practices for social media platforms
- 5.5. Launching a Social Media Campaign
  - 5.5.1. Planning and strategy development
  - 5.5.2. Content creation and scheduling
  - 5.5.3. Execution, management, and evaluation

#### Reading List

#### **Essential Reading**

- McDonald, K. A. (2022). Social media marketing: A strategic approach. SAGE Publications.
- Evans, D., Bratton, S., & McKee, J. (2021). Social media marketing. AG Printing & Publishing.
- Hanna, R., Rohm, A., & Crittenden, V. L. (2011). We're all connected: The power of the social media ecosystem. Business Horizons, 54(3), 265–273. https://doi.org/xxxx
- Safko, L., & Brake, D. K. (2009). The social media bible: Tactics, tools, and strategies for business success. John Wiley & Sons.
- Wollan, R., Smith, N., & Zhou, C. (2011). The social media management handbook: Everything you need to know to get social media working in your business. John Wiley & Sons.
- Zarrella, D. (2009). The social media marketing book. O'Reilly Media.

#### **Additional Reading**

Tuten, T. L., & Solomon, M. R. (2020). Social media marketing. SAGE Publications.

Barker, M., Barker, D. I., Bormann, N. F., & Neher, K. E. (2017). Social media marketing: A strategic approach. Cengage Learning.

Kotler, P., Kartajaya, H., & Setiawan, I. (2021). Marketing 5.0: Technology for humanity. Wiley.

Chaffey, D., & Ellis-Chadwick, F. (2019). Digital marketing: Strategy, implementation and practice (7th ed.). Pearson.

Scott, D. M. (2022). The new rules of marketing and PR: How to use content marketing, podcasting, social media, AI, live video, and newsjacking to reach buyers directly (8th ed.). Wiley.

Date: February 2025

## **MAC202 Data Scriptwriting and Storyboarding**

Module Code and Title: MAC202 Data Scriptwriting and Storyboarding

Programme: Bachelors of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Dr S. Chitra

#### **General Objective**

The module employs hands-on visualization techniques to interpret data and communicate the insights as a compelling narrative. Students will learn to visualize data as graphs, and charts to create a dashboard. Students will become adept in data analysis by constructing a powerful narrative around the visualization to convey data-driven insights leading to action. They will also produce a visual representation of how a story will emerge by applying storyboarding skills in the form of text and images. The module will enhance students' knowledge of data interpretation and communication in terms of visualization, scripting and storyboarding so as to convince the stakeholders.

#### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. identify the relevant plot type to represent the data set
- 2. locate the components strategically in a graph
- 3. employ design thinking and visualisation principles to enhance the charts
- 4. utilise data interpretation skills to extract information from the data set.
- 5. apply data visualization tools to create joints, suitable charts and filters.
- 6. synthesize all the graphs and charts in a dashboard
- 7. discover the story behind the visuals.
- 8. construct a powerful narrative around the analysis.
- 9. develop a visual representation of the narrative as a storyboard.
- 10. create a data story tab for presentation.
- 11. present the data story effectively.
- 12. communicate the key metrics and actionable insights convincingly.

### **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours
Contact	Facilitation and discussion	0.5	60

	Hands-on Lab work	2	
	Group work	0.5	
	Presentations	1	
Independe nt study	Data visualization	2	
	Storyboarding	1	60
	Scripting the narrative	1	
	Total	8	120

#### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

### a. Create and Present the Clear Graph (25%)

Individually, each student has to determine the appropriate plot type that would best represent the given data set and start with clearing away the clutter using Microsoft Excel. Students will distil the graph to its essential components and apply the visual principles, design choices to organize the data within the visual. Below the graphs, students will provide a justification of their action in about 150 words. Each student will present their task to the class by comparing the before and after versions of the graph, emphasizing the reasons for the choices, the importance of clarity and the impact of the call out message. The duration of the presentation for each pair will be 5-7 minutes.

The application and presentation will be assessed out of 25 marks based on the following criteria. This will include qualitative feedback as well. LO 1- 4 will be assessed in this assessment.

## **Application and Presentation Assessment Criteria**

- 2 marks Plot choice: Appropriate graph is used to represent the data and the elements
- 5 marks Visualization: Applied Visualization principles either to add or delete the components such as grid lines, data and axis labels, the legend and title
- 4 marks Supporting materials: Organization of the elements in the graph and the colour choices that significantly supports the visual establishing the difference between the before and after versions
- 4 marks Justification criteria: The rationale succinctly expresses the intent behind the changes in a clear and concise written language.
- 4 marks Critical analysis: Strong and original arguments made by means of comparative analytical insights that make the presentation compelling and convincing
- 2 marks Accuracy and understanding: Sophisticated understanding of the principles applied evidenced by elaboration and answering the queries of the audience
- 2 marks Clarity and fluency: Demonstrate high level of clarity, fluency and appropriate language use in communicating the message
- 2 marks Delivery: Techniques (posture, gesture, eye contact, pronunciation) assure the preparedness and confidence of the presenter.

#### b. Data Visualization and Dashboard Project (40%)

In pairs, students will find a moderately big and clean dataset from the field of their choice and write a project brief explaining the stages of interpretation and analysis required for the chosen dataset in a Google document or MS-Word. Students will analyse the data applying data visualization techniques using either Tableau or in Microsoft Excel. Students will connect to the data source and implement the visualizations, filters and interactive elements. They will develop an interactive and informative dashboard synthesizing all the sheets and the cards

to visualize the data. On the dashboard, students will provide a suitable title for the analysis along with the company logo; add filters and other options to navigate the different charts in order to track KPIs and identify trends.

The project comprising data visualization and dashboard creation will be assessed out of 40 marks using the following criteria. LO 4-6 will be assessed in this project-based assessment.

## **Project Assessment Criteria**

- 10 marks Identify and review: clearly identifies and examines the scope of the dataset. Submits the soft copy of the project brief comprising the heading and objectives to be fulfilled in a Google doc or MS-Word
- 20 marks Data Visualization: applies visualization techniques to analyse the data and create the required sheets and cards with specific details sequenced in a clear and cohesive manner; employs the features skilfully as and when required
- 10 marks Dashboard: clearly synthesizes the sheets and cards with title, logo and options required for navigation to understand the trend

## c. Data Story (30%)

The project pair will discover the story behind the visual dashboard and construct a compelling narrative around the analysis. Storyboarding for dashboards will focus on the user interface (UI) and user experience (UX) to create prototypes. The student pairs will script a visual representation of the narrative as a storyboard in the form of text and images using Powerpoint/Google slides. Based on the dashboard analysis and its narrative representation as a storyboard, the pair will create a data story tab in Tableau and transfer it to PPT. Students will present an impactful data story and communicate the actionable insights effectively.

The data story will be assessed out of 30 marks based on the criteria below and will include qualitative feedback as well. LO 7-13 will be assessed in this assessment.

#### **Visual Data Storytelling Assessment Criteria**

5 marks Discover the story: Frames a narrative around the analysis that brings out the insights

5 marks Storyboard: *script a storyboard thoughtfully with text and images* 

5 marks Data Story Tab: contains content relevant to the subject matter

10 marks Presentation: communicates the message, insights and relevant information within a narrative framework; uses language that is appropriate and free of errors

5 marks Quality delivery: Clarifies the queries and presents the content in creative and engaging ways

#### d. Class Participation (5%)

Students have to actively engage themselves in discussion, group work and lab sessions throughout the semester enabling a vibrant learning atmosphere. Their self-study, individual participation, peer work and preparedness for the activities will be assessed based on the given criteria. LO 13 will be assessed in this assessment.

### **Participation Assessment Criteria**

1 mark Preparedness: actively engage in all class activities

2 marks Listening and Timeliness: Attentive listening and completion of assessments, both the individual and pair work

2 marks Interest and motivation: Self-learning and sharing of knowledge on new skills in ICT

#### Overview of the assessment approaches and weighting

Continuous assessment	Areas of assignments	Quantity	Weighting (%)
A (Theory)	a. Participation	1	5
B (Practical)	b. Applied Presentation	1	25
	c. Dashboard Project	1	40
	d. Data Storytelling	1	30
Total		100	

Pre-requisites: None

**Subject Matter** 

## **Unit I: Data Story Concept**

- 1.1 Introduction to data, visuals and narrative
- 1.2 Role of narrative skills in digital age to understand statistics
  - 1.1.1. Historical narratives: Visual stories of success and failure
    - 1.1.2. Generating ideas from visuals
    - 1.1.3. Communicate the data-driven insights to arrive at informed decisions
- 1.3 Relationship between narrative framework(s) and data storytelling model
  - 1.3.1 Adapted narrative models from Aristotle to Freytag toward Data Storytelling Arc and its stages.
- 1.4 Exploratory versus explanatory analysi
  - 1.4.1 Situational contexts and their impacts

#### Unit II: Create a clutter-free graph

- 2.1 Basics of plot types to communicate data insights in a business setting
- 2.2 Gestalt principles of visual perception
- 2.3 Visual hierarchy of components and colour choices
- 2.4 Declutter identify the clutter and note the reasons for the removal
- 2.5 Re-design a clear graph in Microsoft Excel and write a brief justification
- 2.6 Present a comparative analysis of the versions

#### **Unit III: Data Visualization and Dashboard**

- 3.1. Introduction to Tableau software and its features
- 3.2. Stages of analysing a dataset
- 3.3. Hands-on practice in creating charts and cards for a dataset
- 3.4. Visualization techniques
  - 3.4.1. Identify and review a relevant dataset
  - 3.4.2. Analyse the data to create suitable sheets and cards in sequence with specific details
  - 3.4.3. Method: Apply the features such as joints, filters, calculations and other requirements
- 3.5 Dashboard building- synthesize the sheets and cards fulfilling all the requirements for avigation to understand the trends.

#### **Unt IV: Data Storyboard**

- 4.1. Introduce the concept of storyboarding
- 4.2. Discover the story behind the visual
- 4.3. Construct a narrative around the analysis to map the patterns and trends
- 4.4. Visually script the narrative in a storyboard using text and images

- 4.5. Formalize the sketches of storyboard into a visual data story tab
- 4.6. Transfer the storyboard and the story tab to a ppt

#### **Unit V: Data Storytelling**

- 5.1. Introduction to presentation skills
  - 5.1.1. Basics of presentations tips and techniques
  - 5.1.2. Know your audience
  - 5.1.3. Key components of data story presentation Set up, Conflict, Resolution
  - 5.1.4. Strengthen the content knowledge to prioritize the information
- 5.2. Method to present the data story Context, Business challenge, Key data, Discoveries, Recommendations, Call to Action
- 5.3. Communicate the central message and insights through key metrics and futuristic visions
- 5.4. Present the narrative in creative and engaging ways
- 5.5. Respond to the queries and feedback positively

#### **Reading List**

## **Essential Reading**

Duarte, N. (2019). Data Story: Explain data and inspire action through story. Ideapress Publishing.

Dykes, B. (2020). Effective data storytelling: How to drive change with data, narrative and visuals. John Wiley & Sons.

Glebas, F. (2009). Directing the story: Professional storytelling and storyboarding techniques for live action and animation. Routledge.

Knaflic, C. N. (2015). Storytelling with data: A data visualization guide for business professionals. Wiley online library. https://www.wiley.com/en-gb/9781119002253

Knaflic, C. N. (2022). Storytelling with you: Plan, create and deliver a stellar presentation. Wiley.

Murray, D. G. (2016). *Tableau your data: Fast and easy visual analysis with Tableau software.* (2<sup>nd</sup> edition). Wiley.

#### **Additional Reading**

Cairo, A. (2016). The Truthful Art: Data, Charts and Maps for Communication. New Riders.

Cairo, A. (2019). How charts lie: Getting smarter about visual information. W.W. Norton.

Hurter, C., Riche, N.H., Diakopoulos, N. & Carpendale, S. (Eds.), (2018). Data-driven storytelling. CRC Press.

Knaflic, C. N. (2019). Storytelling with data: Let's practice! (1st edition). Wiley.

Kurnoff, J. & Lazarus, L. (2021). Everyday Business Storytelling. Wiley

Sosulski, K. (2019). Data visualization made simple: Insights into becoming visual. Routledge.

Wexler, S, Shaffer, J., & Cotgreave, A. (2017). The big book of dashboards: Visualizing your data using real-world business scenarios. John Wiley & Sons.

Date: February 2025

## **BML201 Agile Project Management**

Module Code and Title: BML201 Agile Project Management

**Programme:** Bachelors of Digital Communication and Project

Management

Credit Value: 12

Module Tutor: Sonam Choeki Wangmo

#### **General objectives**

The module aims to provide a comprehensive understanding of Agile Project Management, encompassing its historical context, methodologies, core values, principles, and philosophical underpinnings. Students will explore the applicability of Agile in dynamic industries and learn to synthesize various Agile approaches for optimal project outcomes. The curriculum is designed to enhance critical thinking and problem-solving skills, enabling students to adeptly navigate project changes. By examining the fundamental aspects of Project Management and the Agile framework, participants will gain practical knowledge for implementing Agile concepts in professional environments. The module will elucidate the origins and driving forces behind Agile, as well as its constituent methodologies, emphasizing its suitability for projects characterized by uncertainty and change.

## Learning outcomes

On completion of this module, students will be able to:

- 1. articulate the history, methodologies, values, principles, and philosophy of Agile Project Management.
- 2. evaluate the suitability of Agile approaches for rapidly evolving industries and projects.
- 3. analyze and synthesize various Agile methodologies to optimize project effectiveness.
- 4. eemonstrate enhanced problem-solving and critical thinking skills in response to project changes.
- 5. explain the core components and organizational structure of the Project Management course.
- 6. apply Agile principles and practices in a professional context.
- 7. discuss the origins, driving forces, and various methodologies encompassed within the Agile framework.
- 8. justify the application of Agile methodologies in domains characterized by change, uncertainty, or innovation.
- 9. develop adaptability and responsiveness to meet the demands of fast-paced work environments.

**Learning and Teaching Approach** 

Туре	Approach	Hours per week	Total credit hours
Contact	Teaching	2	35
	Practical exercises	2	25
Independent	Independent study, guest lecture and project work	4	60
	Total		120

#### **Assessment approach**

Assessment will be carried out continuously through the following assignments:

#### a. Quiz (10%)

3 marks

To reinforce comprehension of Agile project management principles, learners will complete quiz assessments after the conclusion of each unit. These knowledge checks will facilitate the retention of key concepts and gauge mastery. Quiz outcomes will inform areas necessitating further review to bolster competencies in Agile methodologies. This assessment will assess learning outcomes 1 and 6.

#### **Quiz Assessment criteria**

4 marks	Comprehension: Demonstrates clear understanding of Agile project
	management principles, accurately interpreting key concepts and

terminologies.

3 marks Critical thinking: Applies reasoning and problem-solving skills to analyze

Agile methodologies, evaluating their impact in various project scenarios. Use of evidence and examples: Supports responses with relevant

examples, case studies, or references to Agile frameworks, demonstrating

depth of understanding.

### b. Designing a Product Backlog with Timeline (15%)

In this individual task, the student will demonstrate your ability to design a comprehensive product backlog for a software development project. Students are required to organize and prioritize features, enhancements, and fixes based on a specified timeline. Utilize Asana, a popular project management tool, to create and structure the product backlog efficiently. This assessment will assess learning outcomes 2, 3, and 7.

#### **Product Backlog Assessment Criteria**

4 marks Product Backlog Design: Clearly structured backlog with well-defined user stories and acceptance criteria. Includes a comprehensive set of features, enhancements, and fixes relevant to the project. Timeline Planning: Logical sequencing of backlog items based on 3 marks project phases and dependencies. Feasible and realistic scheduling aligned with project constraints Task Prioritization: Justified prioritization based on business value. 4 marks technical feasibility, and stakeholder needs. Effective use of prioritization techniques (e.g., MoSCoW, value vs. effort). Asana Proficiency: Efficient use of Asana to categorize, label, and 4 marks manage backlog items. Proper use of task dependencies, due dates, and team collaboration features.

# c. Documentary - Comparing Agile and Waterfall Methodologies in Bhutan Through Success Stories (25%)

students will work in groups to produce a short documentary film (3-7 minutes) that compares Agile and Waterfall methodologies in the context of Bhutanese businesses and organizations. The goal of this assessment is to enhance students' analytical and reasoning skills by encouraging them to research and critically evaluate the strengths and weaknesses of each methodology, as well as their ability to communicate their findings creatively and engagingly. This assessment will assess learning outcomes 4 and 5.

#### **Documentary Assessment Criteria**

3 marks Depth of Research and Analysis: Demonstrates thorough understanding, critical evaluation, and comparative insights into Agile and Waterfall methodologies. 3 marks Clarity and Coherence of Narrative: Logical structure, clear sequencing of ideas, and smooth transitions throughout the documentary. Quality of Evidence: Use of well-sourced data, case studies, interviews, 3 marks or real-world examples that substantiate claims. Creativity and Originality: Innovative storytelling techniques, engaging 3 marks visuals, and unique presentation style. Effectiveness of Communication: Clear articulation, professional editing, 3 marks appropriate tone, and engaging delivery of content.

#### d. Case Study - Agile Transformation for Value-Driven Results (40%)

In this case study, the students will delve into the critical realm of Agile methodologies and their application in real-world scenarios. By selecting and dissecting a specific business scenario, they will gain hands-on experience in scoping challenges, choosing the appropriate Agile framework, forming effective cross-functional teams, and implementing Agile practices. This task equips them with the skills to align Agile principles with organizational goals, prioritize value delivery, create value roadmaps, and measure success through relevant KPIs. Ultimately, it empowers students to develop practical recommendations for sustaining Agile practices,

preparing them for careers in today's dynamic business landscape, where agility and value creation are paramount. This assessment will assess learning outcomes 8 and 9.

## The Case Study Assessment criteria

5 marks	Scoping the Scenario: Clearly define the business context and challenges, demonstrating a comprehensive understanding of the scenario's significance.
5 marks	Agile Framework Selection: Justify the chosen Agile framework with relevant criteria, aligning it with the identified challenges and organizational needs.
5 marks	Team Formation and Roles: Outline team composition and individual
	roles effectively, ensuring clarity in responsibilities and
	contributions toward Agile practices.
5 marks	Agile Practices Implementation: Detail the application of Agile
	methodologies, showcasing practical steps taken to implement
	these practices within the scenario.
5 marks	Value-Driven Approach: Emphasize prioritization of value delivery,
	illustrating how Agile practices enhance customer satisfaction and
	business outcomes.
5 marks	Creating the Value Roadmap: Develop a clear roadmap that outlines key milestones, deliverables, and timelines to achieve value-driven results.
5 marks	Measuring Success: Identify relevant KPIs and metrics to evaluate the

Overview of the assessment approaches and weighting

for assessing success.

practices in the organization.

Continuous assessment	Areas of Assignment	Quantity	weighting
A (Theory)	Quiz	4	10
	Case study	1	40
B (Practical)	Documentary	1	25
	Designing Product Backlog	1	15
Total		100	

effectiveness of Agile practices, demonstrating a clear method

and provide actionable recommendations for sustaining Agile

Conclusion and Recommendations: Summarize findings succinctly

Pre-requisites: None

#### Subject matter

5 marks

#### **Unit I: Introduction to Agile in Project Management**

- 1.1. Define and meaning of Agile concepts in Project Management
  - 1.1.1 Agile definition and core principles
  - 1.1.2 Key Agile terminologies
  - 1.1.3 Agile Manifesto and its significance.
- 1.2. Examine the history of Agile
  - 1.2.1 Origins of Agile methodologies
  - 1.2.2 Evolution of Agile practices
  - 1.2.3 Key milestones in Agile development.
- 1.3. Discuss the Agile Values and Principles
  - 1.3.1 Four Values of the Agile Manifesto
  - 1.3.2 Twelve principles of Agile software development

- 1.3.3 Applying Agile values and principles in project management.
- 1.4. Distinguish between Agile and Waterfall methodologies
  - 1.4.1 Characteristics of Agile and Waterfall approaches
  - 1.4.2 Pros and cons of each methodology
  - 1.4.3 Scenarios suitable for Agile vs. Waterfall.

### Unit II: Agile methodologies: Scrum

- 2.1. Understand the concepts and roles under Scrum methodology
  - 2.1.1 Scrum framework overview, Scrum roles: Product Owner, Scrum Master, Development Team,
  - 2.1.2 Scrum artifacts: Product Backlog, Sprint Backlog, Increment.
- 2.2. Explain Scrum values
  - 2.2.1 Commitment, Courage, Focus
  - 2.2.2 Openness, Respect, Implementing Scrum values in project teams.
- 2.3. Discuss writing user stories
  - 2.3.1 Components and acceptance criteria
  - 2.3.2 User story structure and format
  - 2.3.3 INVEST criteria for user stories
  - 2.3.4 Writing effective acceptance criteria.
- 2.4 Discuss Sprint planning
  - 2.4.1 sprint retrospect, backlog refinement, burndown and burn up chart
  - 2.4.2 Sprint planning process and techniques, Conducting effective sprint retrospectives,
  - 2.4.3 Backlog refinement best practices, Using burndown and burn-up charts for project tracking
- 2.5. Prepare Scrum terms worksheets,
  - 2.5.1 Scrum terms retention worksheets,
  - 2.5.2 Creating comprehensive Scrum terminology lists
  - 2.5.3 Developing exercises for Scrum term retention
  - 2.5.4 Designing guizzes and assessments for Scrum knowledge.

#### Unit III: Agile methodologies: Kanban

- 3.1. Introduction to Kanban
  - 3.1.1 Understand Kanban principles, Kanban definition and origins,
  - 3.1.2 Benefits of Kanban in project management.
- 3.2. Discuss the Kanban board and Kanban cards
  - 3.2.1 Kanban board structure and components,
  - 3.2.2 Creating and using Kanban cards effectively,
  - 3.2.3 Customizing Kanban boards for different projects.
- 3.3. Identify key Kanban metrics-Lead time, cycle time, and throughput, Work in Progress (WIP) limits, Cumulative Flow Diagrams.
- 3.4. Discuss key Kanban Practices, Visualizing workflow, Limiting Work in Progress (WIP), Managing flow and continuous improvement.
- 3.5. Apply Notion app in Kanban, Introduction to Notion app for Kanban implementation, Setting up Kanban boards in Notion, Customizing Notion for Kanban workflow management.

#### **Unit IV: Agile Leadership**

- 4.1. Understand Agile Leadership and leadership grid
  - 4.1.1 Characteristics of Agile Leaders
  - 4.1.2 Leadership styles in Agile environments
  - 4.1.3 Applying the leadership grid to Agile teams
- 4.2 Explore Agile leaderships
  - 4.2.1 Situational, Adaptive, and Servant leadership
  - 4.2.2. Situational leadership in Agile contexts
  - 4.2.3. Adaptive leadership principles for Agile teams

- 4.2.4. Servant leadership and its role in Agile environments
- 4.3 Discuss and connect EQ and Soft skill negotiation to Agile leadership
  - 4.3.1 Emotional intelligence in Agile leadership
  - 4.3.2 Developing soft skills for effective Agile leadership
  - 4.3.3. Negotiation techniques in Agile project management.

## **Unit V: Applying Agile in organization**

- 5.1 Explore strategies for ensuring that the team is focused on delivering value-driven results
- 5.2 Aligning Agile practices with organizational goals
- 5.3 Implementing value-based prioritization, Measuring and communicating value in Agile projects
- 5.4 Create effective value roadmap
  - 5.4.1 Developing product vision and strategy
  - 5.4.2 Creating and maintaining a product roadmap
  - 5.4.3 Balancing short-term and long-term goals in Agile planning
- 5.3 Case study- Analyzing real-world Agile implementation examples
  - 5.3.1 Identifying challenges and solutions in Agile adoption
  - 5.3.2 Applying Agile principles to solve organizational problems.

## Reading List

## **Essential Reading**

Anderson, B. (1983). *Imagined communities: Reflections on the origins and spread of nationalism.* London, UK: Verso.

Appelo, J. (2010). *Management 3.0: Leading agile developers, developing agile leaders*. Pearson Education.

Cockburn, A. (2006). *Agile software development: The cooperative game* (2nd ed.). Boston, MA: Addison-Wesley Professional.

Derby, E., & Larsen, D. (2006). Agile retrospectives: Making good teams great.

Dallas, TX: Pragmatic Bookshelf.

Project Management Institute. (2021). Creating a Roadmap for your Agile

Transformation. https://www.pmi.org/learning/library/creating-roadmap-agile- transformation-12801

Date: February 2025

### **BML202 Project Governance in Project Management**

Module Code and Title: BML202 Project Governance in Project Management

Programme: Bachelor of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Phub Dem

#### **General Objective**

This module aims to provide students with a comprehensive understanding of project governance frameworks and their significance in ensuring the success of projects. It covers decision-making processes, roles, responsibilities, accountability structures, risk management, and compliance with regulatory requirements. By engaging in discussions, case studies, and hands-on activities, students will develop the ability to analyze governance structures and propose improvements. The module also emphasizes the importance of ethical considerations and stakeholder management in project governance.

#### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. define project governance frameworks and explain their importance in project management.
- 2. identify key stakeholders, roles, and responsibilities within project governance structures.

- 3. analyze project governance frameworks and evaluate their effectiveness.
- 4. assess risk management strategies and compliance measures in project governance.
- 5. examine ethical considerations in project governance decision-making.
- 6. develop a project governance plan with a structured framework and decision-making model.
- 7. communicate project governance strategies effectively in written and oral formats.
- 8. leverage project management software and digital tools for governance tracking, stakeholder communication, risk management, and decision-making.
- 9. utilize automation and data analysis tools to enhance transparency, accountability, and governance performance assessment.

**Learning and Teaching Approach** 

Туре	Approach	Hours per Week	Total Credit Hours
Contact	Lectures & Discussions	4	60
	Case Studies & Assignments	2	30
	Presentations	1	15
Independent Study	Self-directed learning	1	15
Total		8	120

#### **Assessment Approach**

The assessment will be conducted continuously through the following methods

#### **Project Governance Report (15%)**

Students will be assessed on their understanding of project governance, including its significance, key components, challenges, and strategies to address them. The assessment will evaluate their ability to present logical arguments, relevant examples, and well-structured content. The assessment will be graded out of 15 marks based on the following criteria and scaled down to 3%. This will include qualitative feedback.

Project Gov	vernance Assessment Criteria
3 marks	Content: Demonstrates understanding of project governance with relevant
	examples and logical arguments.
4 marks	Description of Project Governance: Defines project governance, explains its significance, and describes key components (roles, responsibilities, decision-making structures).
3 marks	Identification of Challenges: Identifies common challenges in implementing project governance, such as unclear roles, stakeholder resistance, and resource limitations.
2 marks	Addressing Challenges: Suggests practical strategies to overcome challenges, including improved communication, governance frameworks, and leadership involvement.
2 marks	Coherence and Clarity: Ensures logical structure, clear language, and well- organized content for readability and understanding.
1 mark	Compliance with Assignment Requirements: <i>Meets word count, formatting, referencing, and submission guidelines.</i>

#### b. Class Quiz (25%)

Students will take 2-3 quizzes throughout the semester to assess their understanding of project governance concepts and frameworks. The assessment will assess Learning Outcome 1, 2, 3, 4, 5 and 6.

### Case Study Analysis - Project Governance in Practice (25%)

Each student will individually analyze real-world examples of project governance and its impact on project outcomes. Students will select a project management case study from their locality or region and critically examine the project governance structure and processes. The analysis will evaluate how project governance contributed to the project's success or failure and provide recommendations for improvement. This report will assess Learning Outcomes 3, 4, and 5. The case study report will be graded out of 25 marks based on the following criteria, with qualitative feedback included.

### **Case Study Analysis Assessment Criteria**

5 marks 3 marks 5 marks 8 marks	Content: Demonstrates a strong understanding of project governance with critical insights and relevant case study analysis.  Introduction: Provides background on the case study, explains its relevance, and outlines the objectives of the report.  Description of the Project: Clearly presents the selected project, including its scope, objectives, stakeholders, and governance structure.  Critical Analysis of the Project: Evaluates governance structures, decision-making
Omans	processes, roles, responsibilities, and their impact on project success or failure.
4 marks	Recommendations: Provides practical, case-specific recommendations to improve project governance and enhance outcomes.
2 marks	Coherence and Clarity: Ensures logical structure, clear language, and well- organized arguments for readability and comprehension.
2 marks	Mechanics: Uses correct grammar, spelling, punctuation, and academic writing conventions. Further uses PM tools efficiently.
1 mark	Compliance with Assignment Requirements: Adheres to word count, formatting, referencing, and submission guidelines.

## Project Governance Plan (Group Project with Presentation) (35%)

In a group of 4 or 5, students will develop a project governance plan for a hypothetical project scenario or any selected project. The plan should outline roles, responsibilities, decision-making processes, and reporting mechanisms. Groups must justify their chosen governance structure and strategies based on the project's characteristics and identify potential risks and challenges in implementing the governance plan. The group project will include a class presentation. The governance plan report will assess Learning Outcomes 6, 7, 8, and 9. The group governance plan will be graded out of 30 marks based on the following criteria, with qualitative feedback included.

#### **Project Governance Plan Assessment Criteria**

12 marks	Content: Demonstrates a clear understanding of project governance with well- justified governance strategies, roles, responsibilities, and decision-making processes.
8 marks	Governance Plan Structure: Develops a well-organized governance plan, outlining reporting mechanisms, accountability structures, and alignment with project characteristics.
3 marks	Coherence and Clarity: Ensures logical flow, clear language, and well-structured

presentation of ideas for readability and understanding.

2 marks Compliance with Assignment Requirements: Adheres to word count, formatting.

referencing, and submission guidelines.

5 marks Creativity and Design: Demonstrates innovation in structuring the governance plan,

effective use of Digital Project Management (PM) tools, engaging visual

presentation, and impactful content delivery.

### **Group Presentation (5%)**

Each group will deliver a presentation summarizing their project governance plan and key findings. The presentation should be clear, engaging, and effectively communicate the group's analysis and recommendations. Groups are encouraged to use creative methods, visuals, and Digital Project Management (PM) tools to enhance audience engagement. The presentation will be graded out of 5 marks based on the following criteria, with qualitative feedback included.

#### **Group Presentation Assessment Criteria**

1.5 marks	Content: Clear, concise, and informative content that accurately represents the
	group's project governance plan and key findings

1.5 marks Creativity and Engagement: Engaging and innovative presentation, using creative

methods and visuals (including Digital PM tools) to enhance audience interest.

1.5 marks Delivery: Effective verbal and non-verbal communication, confident presentation

skills, and clear articulation of ideas.

0.5 marks Time Management: Adheres to the time limit, ensuring all key points are covered within the allotted time while maintaining clarity and focus.

**Overview of Assessment Approaches and Weighting** 

Continuous Assessment	Areas of Assessments	Quantity	Weighting (%)
Assignments	a. Project Governance Report	1	15%
	b. Class Quiz	2-3	25%
	c. Case Study Analysis	1	25%
	d. Project Governance Plan	1	35%
Total			100%

#### **Subject Matter**

#### **Unit 1: Understanding Project Governance Frameworks**

- 1.1 Definition of Project Governance
- 1.2 Importance of Project Governance
- 1.3 Key Components of Project Governance
- 1.4 Comparison of Different Project Governance Models

#### Unit 2: Roles and Responsibilities in Project Governance

- 2.1 Identifying Key Stakeholders in Project Governance
- 2.2 Stakeholder Roles and Responsibilities
- 2.3 Role of Executives, Sponsors, and Steering Committees
- 2.4 Role of Project Managers in Governance Structures
- 2.5 Impact of Governance Roles on Project Success

#### **Unit 3: Project Governance Structure & Process**

- 3.1 Governance Frameworks and Their Components
- 3.2 Governance Decision-Making Processes
- 3.3 Compliance Standards and Regulatory Frameworks
- 3.4 Project Governance Best Practices

## **Unit 4: Project Governance Process**

- 4.1 Describe Project Initiation and Planning
- 4.2 Explain Execution and Monitoring
- 4.3 Evaluate Decision-Making and Control
- 4.4 Elucidate Closure and Evaluation

#### **Unit 5: Risk Management and Compliance in Project Governance**

- 5.1 Identifying Risks in Project Governance
- 5.2 Conducting Risk Assessments in Governance Contexts
- 5.3 Developing Risk Mitigation and Contingency Plans
- 5.4 Ensuring Compliance with Standards and Regulations
- 5.5 Governance Strategies for Crisis Management

#### **Unit 6: Ethical Considerations in Project Governance**

- 6.1 Stakeholder Engagement and Transparency
- 6.2 Integrity, Accountability, and Ethical Decision-Making
- 6.3 Data Privacy and Security Concerns in Governance
- 6.4 Social and Environmental Responsibility in Governance

#### **Reading List**

#### **Essential Reading**

PMI (2021). A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – 7th Edition. Garland, R. (2009). *Project Governance: A Practical Guide to Effective Project Decision Making*. Kogan Page.

Müller, R., & Wanner, R. (2008). Project Governance. Gower Publishing.

Wither, J.P., & Harnisch, D.W. (2018). *Governance for Projects: Developing and Managing Governance Frameworks and Decision-Making Models for Large Complex Projects*. J. Ross Publishing.

Shirley, D. (2017). Project Governance: Implementing Corporate Governance and Business Ethics in Non-Profit Organizations. Business Expert Press.

#### **Additional Reading**

Kerzner, H. (2022). Project Management: A Systems Approach to Planning, Scheduling, and Controlling. Wiley.

Beecham, R. (2011). *Project Governance: The Essentials*. IT Governance Publishing.

Hassim, A., Kajewski, S., & Trigunarsyah, B. (2011). *The Importance of Project Governance Framework in Project Procurement Planning*. <a href="https://doi.org/10.1016/j.proeng.2011.07.242">https://doi.org/10.1016/j.proeng.2011.07.242</a>

#### CRD303 Professional Certification (Deep Domain Specialisation)

**Module Code and Title**: CRD303 Professional Certification (Deep Domain Specialisation) **Programme:** Bachelor of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Phub Dem

### **General Objective**

This module enables students to obtain the **Certified Associate in Project Management (CAPM)** certification, which is recognized globally and is essential for entry-level project management roles. The module focuses on providing students with knowledge of project management fundamentals, agile frameworks, predictive methodologies, and business analysis techniques. Students will engage in self-directed learning and online certification courses, while receiving guidance through mock exams and practical sessions to ensure they successfully complete the certification process.

#### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. understand the core principles of project management and its application across different methodologies.
- 2. demonstrate proficiency in the predictive plan-based approach to project management.
- 3. understand and apply agile methodologies in appropriate project scenarios.
- 4. gain insights into business analysis frameworks and their impact on project management.
- 5. apply professional project management strategies in real-world contexts.
- 6. successfully complete CAPM certification exams and gain industry-recognized credentials.

#### **Teaching Methods/Learning Tasks:**

This module is designed for self-directed learning, where students are encouraged to take ownership of their learning. The students will enrol in online certification courses and mock exams offered by certified institutes. Additionally, two hours of lab period will be allocated for the students to practise and discuss these courses. Two mock tests will be conducted before the students appear for CAPM to ensure students clear the exam on time. The tutor will provide guidance and support to the students in various aspects, including:

- Assisting students in identifying preparatory online courses
- Aiding in completing registration forms and coordinating fee payments for the course
- Facilitating self-directed study and ensuring completion of prescribed certification requirements.
- Offering strategies for scheduling and preparing for certification examinations effectively.
- Recommending resources and mock tests to aid in preparation for the certification exam.
- Assisting students in navigating certification course platforms and accessing relevant materials.
- Monitoring student progress and providing consultations on a weekly basis if necessary.

The college will cover the fees upon submission of valid registration forms. However, students must successfully fulfil the prescribed certification requirements, including scheduling and appearing for examinations, within the semester to meet module requirements. If students fail to obtain the certificate, they will be responsible for covering the associated cost.

**Learning and Teaching Approach** 

Approach	Hours per week	Total credit hours
Independent study	6	90
Lab	2	30
Total		120

#### **Assessment Approach**

The assessment will be based on successful completion of the CAPM certification exam:

 Certification Exam (100%): Students must complete the prescribed certification exams within the semester and submit their certificates as proof of completion.

## Subject Matter

### **Unit I: Project Management Fundamentals and Core Concepts**

- 1.1 Understand the five project management process groups and processes.
- 1.2 Explore project life cycles and management strategies.
- 1.3 Develop skills in planning, execution, and problem-solving.
- 1.4 Understand governance, ethics, strategy, and planning.
- 1.5 Understand Organizational Project Management.
- 1.6 Understand and apply PMI standards to ensure effective project execution and alignment with best practices.
- 1.7 Understand Program and Portfolio Management.

#### **Unit II: Predictive Plan-Based Methodologies**

- 2.1 Determine when to apply predictive, plan-driven methodologies based on project complexity scope, and timeline.
- 2.2 Develop comprehensive project plans, schedules, and control documentation, while applying informed decision-making strategies to guide execution and address challenges.
- 2.3 Demonstrate an understanding of project operation and execution processes such as managing resources, engaging stakeholders, mitigating risks, controlling costs, and implementing change management processes to ensure project alignment and achievement of goals.
- 2.4 Utilize Earned Value Management (EVM) techniques to assess project performance and progress in terms of cost, schedule, and scope.

#### **Unit III: Agile Frameworks and Methodologies**

- 3.1 Understand when to use adaptive approaches for project management.
- 3.2 Develop adaptive project plans and document project controls for agile projects.
- 3.4 Plan project iterations and determine how to document project controls for an adaptive project.
- 3.5 Explain the components of an adaptive plan.
- 3.6 Determine how to prepare and execute task management steps.
- 3.7 Explore organizational agility.

#### **Unit IV: Business Analysis Framework**

- 4.1 Demonstrate an understanding of business analysis (BA) roles and responsibilities.
- 4.2 Determine how to conduct stakeholder communication.
- 4.3 Determine how to gather requirements.
- 4.4 Demonstrate an understanding of product roadmaps.
- 4.5 Determine how project methodologies influence business analysis.
- 4.6 Validate requirements through product delivery.

#### **Reading List**

#### **Essential Reading**

- PMI (2021). A Guide to the Project Management Body of Knowledge (PMBOK® Guide) 7th Edition.
- Nielsen, K., Favrot, J.-L., & Marucci, G. (2024). *Mastering the new PMI Certified Associate in Project Management (CAPM) exam (2023 version)*. Taylor & Francis.
- Kanabar, V., Thomas, A. P., & Lechler, T. (2023). Certified Associate in Project Management (CAPM)®
   Exam Official Cert Guide. Pearson IT Certification.

#### Additional Reading

• Meredith, J. R., & Mantel, S. J. (2017). Project Management: A Managerial Approach (9th ed.). Wiley.

Date: February 2025

## **DAT208 Web Analytics & Data Communication**

Module Code and Title: DAT208 Web Analytics & Data Communication

**Programme:** Bachelor of Digital Communication and Project Management **Credit:** 

12

Module Tutor(s): Sangay Lhaden

## **General Objective**

The module aims to introduce students to a comprehensive understanding of web analytics and data communication for effective decision-making in business marketing and campaigning. Learners will be able to explain the fundamentals of how web analytics and data communication works, know their websites better, and learn about the users' behaviour. Students will also be able to delve into various models of analysis by gathering and transforming data using various relevant tools. This module will also incorporate the best practices for data privacy and security.

#### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. explain key principles and concepts of web analytics.
- 2. identify and utilize essential web analytics tools and metrics.
- 3. collect, analyze, and interpret web analytics data effectively.
- 4. generate insights on web performance and user behaviour.
- 5. apply data visualization techniques to enhance data communication.
- 6. develop well-structured analytical reports for decision-making.
- 7. demonstrate proficiency in using data visualization tools.
- 8. critically evaluate and optimize website performance based on analytics findings.
- 9. apply best practices in data privacy, security, and ethical considerations in web analytics.
- 10. communicate analytical findings effectively to stakeholders.
- 11. implement strategies for performance monitoring and testing in digital marketing.

## **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours	
Contact	Teaching	2	60	
Contact	In-class Practical Exercises	2		
Independent	• • • • • • • • • • • • • • • • • • • •	4	60	
study	Project Work.	Т	00	
Total		8	120	

## **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

#### a. Web Analytics Report (20%)

Several Learning Outcomes (LO 1, 2, 3, 4, 5, 6, 8, 10 and 11) will be achieved here by requiring students to analyze, interpret, and report on web analytics data using various tools and techniques. Individual students will prepare a comprehensive report that includes key findings, insights, and recommendations for improving website performance and user experience. The report should reflect and demonstrate a clear understanding of web analytics concepts and the capability to apply them effectively.

#### **Web Analytics Report Assessment Criteria**

- 5 marks Analysis of Web Analytics Data: Accurate data collection, proper use of tools, clear presentation (charts/graphs), and identification of key trends.
- 5 marks Clear Identification of Key Findings: *Clear, well-organized insights highlighting significant trends and patterns with supporting data.*
- 5 marks Insights and Interpretation: In-depth *analysis explaining trends, connections between metrics, and their impact.*
- 5 marks Recommendations for Improvement: *Practical, data-driven improvements aligned with findings, with clear justification.*

#### b. Data Visualization Project (20%)

This assessment aligns with Learning Outcomes 5,6,7 and 10. Each student will be tasked with creating visually appealing and informative data visualisations using web analytics data. Individual students will demonstrate their proficiency in using data visualisation tools and techniques to present complex information in a clear and concise manner. The project should showcase the student's creativity, analytical skills and the ability to communicate insights effectively through visual presentation.

#### **Data Visualization Project Assessment Criteria**

5 marks	Visual appeal and creativity: Engaging design, effective use of colours, and clear data differentiation.
5 marks	Information Clarity and Accuracy: Correct data representation with proper labels and easy interpretation.
5 marks	Insightful Analysis: Highlights key trends and patterns with meaningful interpretations.
5 marks	Effective Communication: Clear, logical presentation suited for the audience.

#### c. Case Study Analysis (20%)

This assessment will fulfil Learning Outcomes 3,4, 8, 9 and 10. Individual students will be provided with real-world case studies related to web analytics and data communication. Each of them will need to analyse the given scenarios, identify the key issues, and propose appropriate solutions based on their understanding of web analytics principles and best practices. The analysis should demonstrate critical thinking, problem-solving skills, and the ability to apply theoretical knowledge to practical situations.

#### Case Study Analysis Assessment Criteria

- 5 marks Identification and in-depth analysis of key issue: Clearly identifies and thoroughly analyzes the main issues in the case study.
- 5 marks Application of web analytics principles in alignment with industry standards: *Uses relevant analytics concepts and aligns with industry best practices.*
- 5 marks Practicality and Feasibility of solutions and resources: *Proposes realistic, data-driven solutions with appropriate resource considerations.*
- 5 marks Critical Thinking and Problem-solving skills and approach: *Demonstrates logical reasoning, creativity,* and a structured approach to problem-solving.

### d. Group Presentation (40%)

This final assessment will help students meet Learning Outcomes 2,3,4,5,6 and 10. The class will be divided into groups of 4-5 members, where each group will have to select a topic related to web analytics and data communication and deliver the presentation after the module tutor approves their idea. The presentation should be well-structured, engaging and demonstrate a deep understanding of the chosen subject matter. Each member of a group should contribute equally to the presentation, showcasing their research, analytical abilities, and effective communication skills. The presentation should also include visual aids such as short video clips, slides or charts to enhance the audience's understanding of the topic. Each group will deliver the presentation within 15-20 minutes.

#### **Group Presentation Assessment Criteria**

- 4 marks Topic idea pitching related to web analytics and data communication: *Clear, relevant, and creative topic related to web analytics and data communication.*
- 5 marks Depth of understanding of chosen topic: Comprehensive understanding of the chosen topic, demonstrating detailed knowledge.
- 5 marks Research and analytical abilities: *Thorough research and effective analysis, supported by credible sources.*
- 5 marks Well-structured presentation: Logical flow, clear introduction, main points, and conclusion.
- 5 marks Engaging delivery of presentation: *Interactive and dynamic presentation style that keeps the audience engaged.*
- 5 marks Effective use of visual aids: Clear, relevant slides, charts, or video clips that enhance understanding.
- 5 marks Integration of multimedia elements: Smooth integration of multimedia elements like videos or animations to support the content.
- 3 marks Adherence to time limits: Effectively presents within the 15–20-minute timeframe.
- 3 marks Conciseness and clarity: Clear, concise communication without unnecessary details.

## Overview of the assessment approaches and weighting

Areas of assessments	Quantity	Weighting (%)
a. Web Analytics Report	1	20
b. Data Visualization Project	1	20
c. Case Study Analysis	1	20
d. Group Presentation	1	40

Total	100

Pre-requisites: None

Subject Matter

#### **Unit I: Introduction to Web Analytics**

- 1.1. Explain the key principles of web analytics
- 1.2. Analyze the importance and application of web analytics
- 1.3. Key terminologies and metrics in web analytics
- 1.4. Research tools and technologies for web analytics
- 1.5. Role and impact of web analytics on decision-making

#### Unit II: Data Collection, Analysis, and Interpretation

- 2.1. Conduct data collection and tracking
- 2.2. Explore different types of data sources and methods
- 2.3. Analyze and interpret the data using web analytics tools
- 2.4. Discuss insights on web performance, user behaviour and trends
- 2.5. Make Decisions after evaluation of quantitative and qualitative data in web analytics

#### Unit III: Data Visualisation, Communication and Report Generation

- 3.1. Demonstrate data visualisation and communication skills in web analytics and reporting
- 3.2. Importance of data visualisation in web analytics and some of the best practices in displaying data visually.
- 3.3. Explore different strategies and tools for visualising data
- 3.4. Effectively communicate data findings and insights to stakeholders
- 3.5. Explain the role of visualisation in communicating data insights

## **Unit IV: Performance Monitoring, Optimization, and Strategic Implementation**

- 4.1. Explain key strategies for monitoring website and campaign performance using web analytics.
- 4.2. Explore A/B testing and multivariate testing for website optimization.
- 4.3. Apply data-driven insights to improve user engagement, conversion rates, and overall web performance.
- 4.4. Utilize key performance indicators (KPIs) to measure and optimize digital marketing effectiveness.
- 4.5. Implement strategies for continuous performance monitoring and reporting for long-term improvement.

### Unit V: Data Privacy, Security and Ethics in Web Analytics

- 5.1 Explain the importance of data privacy, security and ethics in web analytics.
- 5.1 Explore regulations and laws governing data privacy concerning legal and ethical dimensions of collecting user data.
- 5.2 Explain Implications of data security breaches in web analytics with relevant case study.
- 5.3 Explain the Steps organisations must take to protect user data.
- 5.4 Explore techniques to secure data privacy in web analytics.

#### Reading List

#### **Essential Reading**

Allchin, C. (2021). Communicating with data: Making your case with data. O'Reilly Media, Inc.

Beasley, M. (2013). *Practical web analytics for user experience: How analytics can help you understand your users*. Morgan Kaufmann.

Closser, S. (2013). Adobe analytics guick-reference guide: Market reports and analytics. Adobe Press.

Cutroni, J. (2010). Google Analytics. O'Reilly Media, Inc.

Dykes, B. (2011). Web analytics action hero: Using analysis to gain insight and optimize your business. Adobe Press.

Karlins, D., & Matisoff, E. (2019). Adobe analytics for dummies. For Dummies.

Kaushik, A. (2009). Web analytics 2.0: The art of online accountability and science of customer centricity. Sybex.

Kaushik, A. (2007). Web analytics: An hour a day. Sybex.

Mortensen, D. R. (2009). Yahoo! Web analytics: Tracking, reporting and analyzing for data-driven insights. Sybex.

Rodrigues, J. (2022). *Product analytics for data-driven decisions: Derive insights from web analytics data.* Addison-Wesley Professional.

#### **Additional Reading**

Harvard Business Publishing Education. (2025). *Web analytics collection*. Harvard Business Publishing Education.

Maheshwari, A. (2025). Data analytics made accessible. Coursera.

Provost, F., & Fawcett, T. (2025). Data science for business: What you need to know about data mining and data-analytic thinking. WSCube Tech.

Soman, D., Kim, M., & An, J. (2025). *Consumer behavior online: A playbook emerges*. Harvard Business Publishing Education.

Venkatesan, R., & Gibbs, S. (2025). Paid search advertising. Harvard Business Publishing Education.

Date: February 2025

#### MAC203 Communications via Transmedia and Gamification

**Module Code and Title:** MAC203 Communications via Transmedia and Gamification

**Programme:** Bachelor of Digital Communication and Project Management **Credit:** 

12

Module Tutor(s): Sangay Lhaden and Anju Chhetri

Module Coordinator: Sangay Lhaden

#### **General Objective**

This module aims to introduce students to the concepts of transmediality and its applications in digital communication and gamification to create immersive and engaging experiences across digital platforms. The module will provide students with the skills and knowledge necessary to design and implement effective gamification strategies in digital communication. It will also encourage critical thinking and reflection on the ethical and social implications of gamification and transmedial storytelling in contemporary culture.

#### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. define and explain the principles of transmediality.
- 2. identify and analyze different transmedia storytelling methods.
- 3. demonstrate an understanding of gamification principles and their applications.
- 4. design effective loyalty programmes using gamification
- 5. develop social media campaigns incorporating gamification strategies.
- 6. analyze the role of transmediality in digital marketing and communication.
- 7. design and implement interactive experiences using gamification.
- 8. assess the impact of gamification on communication, education, and entertainment.
- 9. compare different types of transmedia storytelling and their effectiveness.
- 10. critically evaluate ethical and social implications of gamification and transmediality.
- 11. utilize multiple media platforms for engagement in digital communication.

## **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours	
Contact	Teaching	2	60	
Contact	In-class Practical Exercises	2		
Independent study	Research, Self-study, Project Work	4	60	
Total		8	120	

#### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

# a. Quiz I (10%)

Students will take an MCQ quiz on VLE (Virtual Learning Environment) aimed at checking comprehension of and identifying gaps in the contents of units I and II.

#### b. Transmedial Critique (20%)

In this assessment, students will engage in a trans medial critique that allows you to analyze and evaluate the effectiveness of a specific media text across different mediums or platforms. This assessment aims to assess their ability to critically examine the ways in which a media text is adapted, transformed, or interpreted across various media channels. At the end of their analysis, they will create an 8-minute presentation each. The assessment will help fulfil Learning Outcomes 2,9,10 and 11.

# **Transmedial Critique Assessment Criteria**

- 4 marks Introduction: Clearly introduces the media text, its context across platforms, and stats the focus of the critique with a strong thesis.
- 7 marks Critique: Thoroughly analyzes how the media text adapts across platforms, evaluates its effectiveness, and uses specific examples to support the points.
- 3 marks Delivery: Speaks clearly, confidently, and engages the audience with good pacing, eye contact, and enthusiasm.
- 3 marks Presentation aids: Use of relevant, high-quality visuals or media that support the critique, integrated smoothly into the presentation.
- 3 marks Conclusion: Recaps key points, offers insightful final thoughts, and concludes the presentation clearly and concisely.

# c. Single-Channel Campaign Design (20%)

In this assignment, students will work in groups of five. Each group will choose an existing or imagined product/service/cause and design a single-channel social media marketing campaign that incorporates elements of gamification. The purpose of the campaign is to engage and interact with your target audience in a fun and interactive way, while promoting a specific product, service, or cause. This assignment will allow students to achieve Learning Outcomes 3,4,5,6 and 11, by applying knowledge of social media marketing strategies and gamification principles to create an effective and engaging campaign. Students must choose this carefully as the next assignment will be built on this.

# Single-Channel Campaign Design Assessment Criteria

- 3 marks Choice of target audience: Defines and justifies target audience based on demographics, interests, and behaviours relevant to the campaign.
- 3 marks Campaign goals: Clear, measurable goals for the campaign (e.g., engagement, awareness) that align with the strategy adopted.
- 4 marks Choice of social media channel: Suitable platform(s) for the campaign backed by evidence to justify why it's the best choice for reaching the selected target audience.
- 5 marks Use of gamification elements: *Incorporates gamification techniques like points, rewards, or challenges to engage the audience in an interactive and fun way.*
- 5 marks Content Strategy: Presents content plan with relevant, engaging, and varied content tailored to the selected platform(s), ensuring it supports the campaign goals.

### d. Quiz II (10%)

Students will take an MCQ quiz on VLE (Virtual Learning Environment) aimed at checking comprehension of and identifying gaps in the contents of units IV and VI.

# e. Marketing (40%)

In this assignment, groups of ten students will develop an omni-channel media campaign for the three best business entity campaigns chosen in CA3. Students will have to choose an alternate media platform to showcase their ability to effectively utilize multiple media platforms to engage and connect with their target audience. This assignment aims to explore the differences and similarities between these two marketing channels and develop skills in adapting strategies to different platforms.

#### Transmedial Marketing Assessment Criteria

- 3 marks Analysis of the social media strategy from previous assignment: Review of the previous campaign, highlighting strengths, weaknesses, and key takeaways from the social media strategy.
- 7 marks Marketing goals for the new platform: Clear, measurable objectives for the new platform, aligning them with the overall marketing strategy.
- 5 marks Identification of target audience for the new platform: Defines and justifies the audience for the new platform(s), considering demographics, behaviour, and platform relevance.
- 5 marks Adaptation of content and engagement techniques: *Modifies campaign content and interaction strategies to fit the new platform(s) while maintaining brand consistency.*
- 7 marks Design of conversion strategies: *Presents methods to turn audience engagement into tangible actions* (e.g., purchases, sign-ups, shares)
- 6 marks Performance measurement: Established relevant key metrics and tracking methods to assess campaign success and effectiveness.
- 7 marks Campaign evaluation: Conducts a comprehensive assessment of the omni-channel campaign, comparing platform effectiveness and overall impact.

#### Overview of the assessment approaches and weighting

Areas of assessments	Quantity	Weighting (%)
a. Quiz I	1	10

b. Transmedial Critique	1	20
c. Single-Channel Campaign Design	1	20
d. Quiz II	1	10
e. Transmedial Marketing	1	40
Total	I	100

Pre-requisites: None Subject Matter

# **Unit I: Introduction to Transmediality**

- 1.1. Define Transmediality
- 1.2. Identify and explain the principles of transmediality
- 1.3. Discuss the concept of transmedia storytelling and its elements
- 1.4. Compare different types of transmedia storytelling

#### **Unit II: Introduction to Gamification**

- 2.1 Explain Gamification
- 2.2 Explain the history and development of game studies
- 2.3 Identify and evaluate the different elements of gamification, includibg game mechanics and feedback systems
- 2.4 Define various game design principles
- 2.5 Compare the concepts of gamification and transmediality

# Unit III: Applications of Gamification and Transmediality in Marketing

- 3.1 Identify and explain various applications of gamification in marketing
- 3.2 Design effective loyalty programmes that use gamification to drive customer engagement and loyalty
- 3.3 Develop and execute social media campaigns that use gamification to drives user participation and engagement
- 3.4 Design and implement interactive experiences using gamification to engage audiences in new and exciting ways

#### Unit IV: Digital Media Strategies for Transmedia and Gamification

- 4.1. Explain interactive storytelling and its role in transmedia narratives.
- 4.2. Analyze how gamification enhances digital storytelling with case studies.
- 4.3. Identify strategies for creating immersive user experiences across digital platforms.
- 4.4. Evaluate platform selection and content adaptation for transmedia storytelling.
- 4.5. Examine the role of gamification in digital marketing and social media engagement.

# Unit V: Impact of Gamification and Transmediality on Communication

- 5.1. Analyze the impact of gamification and transmediality in education, marketing, and entertainment.
- 5.2. Different types of transmedia storytelling
- 5.3. Evaluate the role of user-generated content in transmedia storytelling
- 5.4. Assess audience engagement strategies and feedback mechanisms in gamified transmedia experiences.
- 5.5. Explore the integration of emerging technologies (e.g., AR, VR, AI) to enhance gamification and transmedia storytelling.

#### **Unit VI: Ethical and Social Implications**

6.1. Compare best practices through case studies of transmediality and gamification

- 6.2. Explore the cultural and social implications of transmedia storytelling
- 6.3. Evaluate the ethical implications of transmedia storytelling
- 6.4. Evaluate the ethical implications of gamification

#### **Reading List**

# **Essential Reading**

Zeiser, A. (2015). Transmedia marketing: From film and TV to games and digital media. Routledge.

Mcerlean, K. (2018). Interactive narratives and transmedia storytelling. Routledge.

Niklas, S., & Elleström, L. (Eds.). (2019). Transmediations: Communication across media borders. Routledge.

Rampazzo, R., Alzamora, G. C., & Tárcia, L. (2020). Theory, development, and strategy in transmedia storytelling. Routledge.

Regester, M., & Larkin, J. (2008). Risk issues and crisis management in public relations: A casebook of best practice. Kogan Page.

### Additional Reading

Bogost, I. (2011). Persuasive games: The expressive power of videogames. MIT Press.

Dena, C. (2009). Transmedia practice: Theorising the practice of expressing a fictional world across distinct media and environments. University of Sydney.

Fuchs, M. (2021). Gamification design for engagement: Designing content and context in digital learning. Springer.

Jenkins, H. (2006). Convergence culture: Where old and new media collide. NYU Press.

Werbach, K., & Hunter, D. (2020). *The gamification toolkit: Dynamics, mechanics, and components for the win.*Wharton Digital Press.

Date: 25 February 2025

# BML203 Project Planning & Operations

Module Code and Title: BML203 Project Planning & Operations

Programme: Bachelor of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Jamyang Dolkar and Phub Dem

Module Coordinator: Jamyang Dolkar

# **General Objective**

The module aims to provide students with knowledge of the project planning process and analyse operational activities. Students will learn to select and apply appropriate tools for project planning and monitoring. The students will also carry out case studies, where they will learn to formulate meaningful project plans and apply operational strategies to a given project. This will give them a real-world setting experience and help prepare them for future project management roles.

#### **Learning Outcomes**

On completion of the module, students will be able to:

1. describe the scope and structure of project operations, identifying their key components and assessing their alignment with project objectives.

- 2. apply project planning and scheduling strategies using key methodologies and tools for effective management.
- 3. analyse the scope and structure of project operations to assess their effectiveness, feasibility, and alignment with project goals.
- 4. evaluate resource optimization strategies by considering availability, skill requirements, budget constraints, and project risks.
- 5. explain the application of Six Sigma and Lean principles in project management to enhance efficiency, reduce waste, and improve overall project performance.
- 6. implement change management and problem-solving approaches to address challenges that arise during the project lifecycle.
- 7. assess project performance against predefined objectives, targets, and key performance indicators to ensure continuous improvement.

# **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours
	Facilitation and discussion	2	
Contact	Presentation	1	60
	In-class exercises, case discussions and group work	1	
Independe	Self-study	2	60
nt study	Assignments	2	60
Total		8	120

#### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

#### a. Unit Quiz (15%)

Following the completion of each unit, students will take a short quiz. This practice will support a more focused review of class topics and enhance their comprehension of the content. The quiz will be graded out of 15%.

#### b. Individual Written Assignment - Critical review of project improvement models(20%)

Each student will write and submit an individual assignment on a critical review of the project improvement models. The individual assignment will be of 1500–2000 words. This assignment will enable students to evaluate the strengths and constraints of the models for improvement and understand one of the models in detail. This assignment will assess learning outcomes 1,2 and 3.

#### **Critical Review Assessment Criteria**

3 Marks Introduction: The introduction is engaging, and provides a strong foundation the critical review. effectively introduces lt the project improvement models. outlines the purpose of the review, and presents a well-defined thesis or central argument.

4 marks Content: The assignment demonstrates a strong understanding of project improvement models, providing relevant explanations, key principles, and an in-

depth analysis of various models. The content is well-researched, logically structured, and appropriately referenced.

- 8 Marks Discussion: The discussion is insightful, well-structured, and critically evaluates the strengths and constraints of project improvement models. It includes a comprehensive analysis of at least one model in detail, integrating relevant examples, case studies, or empirical evidence to support arguments. Comparisons between models, implications for real-world applications, and potential limitations are thoroughly explored.
- 3 Marks Conclusion: The conclusion effectively summarizes key points, reinforces the central argument, and provides a strong closing statement. It demonstrates a clear synthesis of ideas, reflecting on the significance of project improvement models in practice.
- 2 marks References: The references are well-organized and formatted according to APA standards. All sources are credible, relevant, and correctly cited, contributing to the accuracy and reliability of the assignment.

#### c. Case study on Operational structure (25%)

Students will be given case study. For the case study students will evaluate and study the operational structure of the given project like IKEA, APPLE, Samsung etc. They will critically analyse and review the operational structure of the project and assess its decision making process. This assignment will enable students to apply their knowledge of operational structure. This assignment will assess learning outcomes 1, 4 and 7.

### **Case Study Assessment Criteria**

- 3 Marks describes Identify team organisation (stakeholders): Clearly identifies and key stakeholders involved in the project. Demonstrates an understanding of their roles, responsibilities, and interactions within the operational structure. The analysis reflects stakeholder influence on decision-making and project execution.
- 10 marks Evaluate integration of the Operational Structure Components: Provides a comprehensive evaluation of how various components of the operational structure (such as hierarchy, workflow, communication channels, and resource allocation) are integrated within the project. The analysis is detailed, supported by examples, and demonstrates critical thinking about the effectiveness of the structure.
- marks Identify and discuss the challenges mitigation Identifies and Strategies: key operational challenges faced by the project and critically examines their impact. mitigation Discusses strategies, supported bv relevant examples industry best practices.
- 2 marks Mechanics (grammar, spelling, sentence structure): The assignment is well-written, with proper grammar, spelling, and sentence structure. Ideas are clearly articulated, enhancing readability and coherence.
- 8 Marks Application of Project Monitoring Techniques and Tools: Demonstrates strong understanding of project monitoring techniques relevant to the case study. Identifies explains appropriate tools KPIs, dashboards. performance tracking (e.g., software) used for monitoring the project's operational efficiency.

1 marks Referencing: References are properly formatted according to APA standards. Sources are credible, relevant, and cited correctly.

# d. Create a project plan based on a real project (40%)

Students will develop a project plan on a real-life scenario (construction project, marketing campaign, and event) with consultation with the tutor. This assignment will assess students' understanding on project planning. This will be a group based project. The student will apply their knowledge of project planning techniques, tools and methodologies. This student will also enable students to analyse the project scenario and develop critical skills of project planning while considering various project constraints and stakeholders. Peer assessment will be carried out. This will assess learning outcomes 2,3, 4 and 7. This project will be carried out in phases.

- 1. The first phase of the project will be drawing a project plan. This should include project objective and scope, Work breakdown Structure, Task sequencing and Dependencies. The project will be then presented in the class and feedback will be collected
- 2. The student will then incorporate the feedback. The students will then assess the resources needed for the project, conduct resource allocation and propose a continuous improvement plan.
- 3. The students will then give a final presentation, where all group members are expected to contribute. Each student will have an opportunity to present their portion of the project. Additionally, student peers will assess the contribution and effort put forth by each individual during the project

# **Project Planning Assessment Criteria**

- 3marks Clarity on project objectives and scope: The project objectives are well-defined, specific, and measurable, clearly outlining the project's purpose. The scope effectively details the project boundaries, deliverables, and constraints, ensuring a focused and achievable plan.
- 5 marks Work breakdown structure: Demonstrates a structured and logical breakdown of the project into smaller, manageable tasks. The WBS is comprehensive, ensuring clarity in task dependencies and deliverables, with an appropriate level of detail to facilitate project execution.
- 5 marks Projecting planning and scheduling : Effectively applies project planning methodologies to develop a clear timeline. Utilizes appropriate scheduling techniques (e.g., Gantt charts, network diagrams) to illustrate task dependencies, critical paths, and resource allocation. The schedule is realistic and aligns with project constraints.
- 2 marks Stakeholder Mechanics (spelling, punctuation, grammar, structure):

  The project plan is well-written, with proper grammar, spelling, and sentence structure. Ideas are clearly articulated, ensuring readability and coherence. The document maintains a professional tone and logical flow.
- 5 marks Presentation (case presentation, discussion): The project is presented in a structured and engaging manner, covering key aspects such as objectives, scope, planning, and stakeholder considerations. The presentation is well-organized, with effective use of visual aids (e.g., slides, charts). Students demonstrate confidence, professionalism, and the ability to address questions effectively.

#### **Resource allocation and improvement**

3 marks Create resource inventory : Provides a detailed and well-organized inventory of

project resources, including human, material, technological, and financial components. Clearly categorizes and quantifies resources to ensure project fooibility and efficiency.

feasibility and efficiency.

resource allocation strategies. Identifies resource gaps and proposes logical solutions for optimization. Justifies the selection and distribution of resources in

alignment with project requirements

5 marks Project improvement: Proposes well-reasoned strategies for continuous project

improvement. Identifies risks, quality control measures, and contingency plans to enhance project outcomes. Effectively integrates feedback and lessons learned to

refine project execution.

4 marks Presentation: At the end of the project, students will deliver a structured presentation

covering key aspects of their project, including objectives, planning, resource allocation, challenges, stakeholder engagement, and lessons learned. Visual aids such as Gantt charts and workflow diagrams should be used to enhance clarity. All members must contribute equally, demonstrating their individual roles. Clear communication, professional delivery, and peer assessment will be key evaluation

criteria.

5 marks Peer assessment: Each group member evaluates their peers' contributions

teamwork, participation, quality of input, and commitment to project success. Peer feedback is fair, constructive, and well-documented, ensuring accountability within

the group.

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A (Theory)	a. Unit Quiz	1	15
	b. Individual written assignment	1	20
	c. Case study	1	25
B (Practical)	d. Project plan	1	40
Total			100

Pre-requisites: None

Subject Matter

#### Unit I: Introduction to Project Planning and Scheduling

- **1.1** Introduction to project planning and scheduling strategies
  - 1.1.1 Key components of an effective project pl
  - 1.1.2 Project planning vsproject scheduling
- 1.2 Formulate objectives for project planning
- 1.3 Identifying project stakeholders and their influence on project execution
- 1.4 Importance of project documentation (charters, scope statements, and communication plans)
- 1.5 Project planning techniques (Gantt charts, Critical Path Method, network diagrams)
- 1.6 Project charter
- 1.7 Conducting feasibility studies and risk assessments

#### **Unit II: Project Operations and Strategic Approaches**

- 2.1. Understanding operations and process management in projects
- 2.2. Sequencing project activities and identifying dependencies
- 2.3. Six Sigma methodology and Lean principles in project management

- 2.4. Developing operational structures (functional, matrix, cross-functional teams)
- 2.5. Assessing project forecasting methods (qualitative and quantitative approaches)

# **Unit III: Project Resource Management and Inventory Control**

- 3.1 Budgeting and managing project resources (financial planning, allocation, monitoring)
- 3.2 Identifying and categorizing financial and non-financial resources
- 3.3 Project tracking tools and techniques for monitoring progress
- 3.4 Agile and Lean principles in supply chain management
- 3.5 Vendor management and procurement strategies in project execution
- 3.6 Cost estimation and comprehensive project budgeting

# **Unit IV: Project Monitoring and Risk Management**

- 4.1 Approaches to managing change and solving project lifecycle challenges
- 4.2 Assessing project performance gaps and identifying areas for improvement
- 4.3 Performance measurement techniques and benchmarking
- 4.4 Implementation of risk mitigation and contingency plans

# Unit V: Project Performance Improvement and Knowledge Management

- 5.1 Evaluating project performance against objectives and key performance indicators
- 5.2 Setting clear performance targets and benchmark
- 5.3 Identifying project performance variances and improvement areas
- 5.4 Techniques for project improvement (best practices, industry standards, innovative methodologies)
- 5.5 Capturing project experiences and using knowledge management strategies for future project 5.6 optimization

# **Reading List**

#### **Essential Reading**

- 1. Greasley, A. (2020). Absolute essentials of operations management. Routledge.
- 2. Haugan, T. G. (2010). *Project management fundamentals: Key concepts and methodology* (2nd ed.). Berrett-Koehler Publishers.
- 3. Kerzner, H. (2013). *Project planning, scheduling, and control: The ultimate hands-on guide to bringing projects in on time and on budget* (6th ed.). McGraw-Hill Education.
- 4. Kerzner, H. (2017). *Project management: A systems approach to planning, scheduling, and controlling* (12th ed.). John Wiley & Sons.
- Manea, V. C., & Sabou, F. (2023). Leadership paradigms for remote agile development teams [E-book]. Apress.
   Retrieved from https://learning.oreilly.com/library/view/leadership-paradigms-for/9781484287194/
- 6. Slack, N., & Brandon-Jones, A. (2019). Operations management (9th ed.). Pearson Education.

#### **Additional Reading**

- Heizer, J., Render, B., Munson, C., & Sachan, A. (2023). *Operations management:* Sustainability and supply chain management (14th ed.). Pearson.
- Highsmith, J. (2019). *Agile project management: Creating innovative products* (2nd ed.). Addison-Wesley.
- Kaplan, R. S., & Norton, D. P. (2004). Strategy maps: Converting intangible assets into tangible outcomes. Harvard Business School Press.
- Meredith, J. R., Shafer, S. M., & Mantel, S. J. (2021). *Project management: A strategic managerial approach* (11th ed.). Wiley.
- Womack, J. P., & Jones, D. T. (2003). Lean thinking: Banish waste and create wealth in your corporation (2nd ed.). Free Press.

Date: February 2025

# BML204 Project Quality and Risk Management

Module Code and Title: BML204 Project Quality and Risk Management

**Programme:** Bachelor of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Yeshey Wangmo

# **General Objective**

This module aims to equip students with the essential knowledge and skills to manage project quality and risk effectively. The module combines theory with practical skills to emphasize the importance of quality and risk management in delivering successful project outcomes. It will further enhance students' decision-making and problem-solving abilities through hands-on experience using risk and quality management tools and techniques, preparing them to apply industry standards and requirements.

### **Learning Outcomes**

On completion of the module, students will be able to:

- 1. explain the key concepts and terminologies in risk and quality management
- 2. identify different types of risks and quality standards
- 3. explain risk assessment and quality control tools
- 4. discuss the principles of quality management
- 5. compare and contrast various quality management tools and techniques
- 6. assess quality management processes and tools used in projects
- 7. present risk and quality strategies with evidence
- 8. analyze the roles and responsibilities of a project manager in managing quality and risk.
- 9. apply risk assessment techniques and quality control methods
- 10. develop risk mitigation and quality improvement plans
- 11. critique case studies on quality and risk management in different industries to extract lessons learned.

#### Learning and Teaching Approach

Туре	Approach	Hours per week	Total credit hours
	Facilitation and discussion	2	
Contact	In-class exercises, presentation,s, and group work	1.5	60
	Guest Lecture and workshop	0.5	
Independent	Case Studies and Simulation	2	60
study	Self-study	2	60
Total		8	120

#### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

#### a. Quizzes (20%)

The students will take short quiz after the completion of each unit using the VLE platform to provide a more focused review of class topics to enhance their understanding of the content. Learning Outcome (LO) 1, 2 and 3 will be assess by this assessment.

### b. Quality Management Case Study (30%)

Students have to visit project-initiated areas, preferably an ongoing or a completed national or community-based project in and around Trashigang Dzongkhag and write a case study between 1000-1500 words. Students may select any publicly accessible construction, manufacturing or social project that provide sufficient information to evaluate quality management aspects. The report should feature an analysis of the quality management process, use of quality management tools, an evaluation of the effectiveness of the strategies used in the project, and a discussion of future considerations related to the selected project. The review report will be assessed based on the following criteria. Learning Outcome (LO) 6,7,8 and 10 will be assess by this assessment.

# **Quality Management Case Study Assessment Criteria**

3 marks	Introduction: provide specific introduction and conclusion, ensure logical sequencing and smooth transitions, maintain cohesive and well-structured content
10 marks	Observation and Analysis: clearly outlines quality management process and tools utilized, and the impact and effectiveness of the process and tools in the project
5 marks	Recommendation: creative and practical suggestions for quality management process based on the observation and analysis.
3 marks	Conclusion: restate the main findings and insights from the case study
3 marks	Supporting evidence: provides at least three supporting pieces of evidence and examples
3 marks	Quality of Writing: well-written paper with proper grammar, appropriate use of academic language, adherence to formatting guidelines including proper citations and reference
3 marks	Academic Integrity: Adherence to academic integrity standard and demonstrate originality in thoughts and analysis

# c. Group Project (50%)

This assignment is a group task and carries a weightage of 50%. It is a simulated project where students in a group of 4-5 members will work on developing a comprehensive risk management plan and participate in interactive simulations that replicate real-world project management scenarios. Simulation will involve roleplaying and decision-making exercise. The team will be responsible for managing all the aspects of the simulated project, from planning and development to execution and evaluation. Learning Outcome (LO) 7, 8, 9, 10 and 11 will be assess by this assessment.

### Risk Management Plan (20%)

The group will write a comprehensive risk management plan between 1000-1500 words that aligns with the project requirements. Through this assessment, students will demonstrate their understanding of risk management processes and procedures and their ability to apply them to a project scenario. The risk management plan should identify potential risks, assess their impact and likelihood, and outline strategies for risk mitigation, and incorporate various risk management tools discussed in the module. A well-structured project plan will guide the team through the simulation, ensuring they can respond effectively to challenges and make informed decisions. The risk management plan will be assessed based on the criteria below.

# **Risk Management Plan Assessment Criteria**

2 marks	Introduction: Clearly provide an overview of the hypothetical project
4 marks	Risk Identification: Clearly identifies and describes potential risks relevant to the project.
4 marks	Risk Assessment: utilize appropriate risk assessment matrix and clearly communicate the results, and outlines clear process for monitoring risk, and use of appropriate risk management tools
4 marks	Mitigation Strategies: propose realistic and effective strategies for mitigating risk, robustness of the monitoring plan
2 marks	Conclusion: Summary of the plan and its anticipated effectiveness
2 marks	Quality of Writing: well-written paper with proper grammar, appropriate use of academic language, adherence to formatting guidelines including proper citations and reference

2 marks Academic Integrity: Adherence to academic integrity standard and demonstrate originality in

thoughts and analysis

# Simulation Performance (25%)

The groups will engage in a live simulated project exercise based on previously developed risk management plan. The simulation should demonstrate how the risk management strategies are applied in a project scenario. Students will present their findings and experiences during the simulation, highlighting the effectiveness of their risk management approach. The success of the simulation is closely tied to the thoroughness and clarity of the project plan developed by the team.

#### **Simulation Assessment Criteria**

5 marks	Teamwork and Collaboration: Demonstrates teamwork, collaboration, and adaptability during the simulation
5 marks	Problem-Solving and Decision-Making: Quality of decision-making and problem-solving skills demonstrated during the simulation.
5 marks	Implementation: ability to apply risk management strategies effectively during the simulation
5 marks	Tracking and Adjustment: Appropriate use of risk management tracking tools to monitor and adjust progress, and effective communication with stakeholders
5 marks	Preparation: demonstrate adequacy of preparation, understanding of roles, and familiarity with the risk management plan

# Peer Evaluation (5%)

Each student will evaluate their teammates' contributions to ensure fairness and accountability. The peer evaluation will include teamwork, communication, problem-solving, and leadership. The peer evaluation will be assessed out of 20 marks based on the following criteria and scaled down to 5%.

#### Peer evaluation assessment criteria

4 marks	Commitment to group goals: consistently and actively works towards
	group goals
4 marks	Contribution of Knowledge: consistently and actively contributes
	information
4 marks	Collaboration: always offers to help group members
4 marks	Overall Engagement: actively engages in all aspects of team meetings,
	contributing positively to the team's progress and dynamics
4 marks	Attendance: Attends all the team meetings

#### Overview of the assessment approaches and weighting

Continuous assessment	Areas of assignments	Quantity	Weighting (%)
A (Theory)	a. Quiz	2	20
	b. Case Study	1	30
B (Practical)	c. Risk Management Plan	1	20
	c. Simulation	1	25
	c. Peer Evaluation	1	5
Total		100	

Pre-requisites: None

# **Subject Matter**

# **Unit I: Introduction to Project Quality and Risk**

- 1.1. Key concepts and terminologies quality and risk
- 1.2. History of project quality and risk management.
  - 1.2.1. Quality Management System (QMS), and Risk Management System (RMS)
  - 1.2.2. Benefits of QMS and RMS
- 1.3. Types of risk and quality standards
- 1.4. Importance of quality and risk management in project
- 1.5. Project Manager's Roles and Responsibilities

#### **Unit II: Managing Quality**

- 2.1. Quality Gurus—Philosophies
- 2.2. Principles of Quality Management
- 2.3. Quality and its linkages with project scope, time and cost
- 2.4. Quality Management Process
  - 2.4.1. Quality Definition
  - 2.4.2. Quality Assurance
  - 2.4.3. Quality Control
  - 2.4.4. Quality Improvement
- 2.5. Quality Management Tools and Techniques
  - 2.5.1. Benefits and purpose of Quality Management tools
  - 2.5.2. QM tools: Flowcharts (Process flowchart, swim lane flowchart), SIPOC, Histogram, Control Chart, Pareto Analysis, Cause and Effect Diagram, Six Sigma (DMAIC), Kaizen, PDCA Plan, Do, Check and Adapt
- 2.6. Quality Management Plan

# **Unit III: Managing Risk**

- 3.1. Risk Roles: Risk Manager, Risk Owner, Risk Team
- 3.2. Risk Environment and Culture
  - 3.2.1. Risk attitude, appetite, and maturity
  - 3.2.2. Tolerance, Thresholds and Triggers
  - 3.2.3. Stakeholders and Risk Culture
- 3.3. Team Engagement in Appetites, Attitudes and Priorities
  - 3.3.1. Forming
  - 3.3.2. Storming
  - 3.3.3. Norming
  - 3.3.4. Performing
  - 3.3.5. Adjourning
- 3.4. Risk Management Process
  - 3.4.1. Identify risk
  - 3.4.2. Analyse risk
  - 3.4.3. Evaluate risk
  - 3.4.4. Treat Risks
  - 3.4.5. Monitor risk

#### **Unit IV: Risk Management Tools and Techniques**

- 4.1. Three R's: RAM, RACI and RBS
- 4.2. Risk Management Approaches: Mind mapping, Affinity Diagram, SWOT, Root Cause Analysis, Probability and Impact Matrix, Decision Tree Analysis, Cost Benefit Analysis, and Sensitivity Analysis
- 4.3. Risk response strategies for threats and opportunities, and overall project risk
- 4.4. Effectiveness of risk mitigation strategies
- 4.5. Risk Management Plan and Risk Register

# **Unit V: Quality and Risk Management in Industries**

- 5.1. Three Pillars Risk, Compliance and Integration
- 5.2. Case study
- 5.3. Common pitfalls, best practices and key takeaways

# Reading List

# **Essential Reading**

Bissonette, M. M. (2016, April). *Project Risk Management: A Practical Implementation Approach*. Project Management Institute.

Dale, B., G. (2003). Managing Quality. Blackwell Publishing Ltd.

Pyzdek, T., & Keller, P. (2012).. *The Handbook for Quality Management: A Complete Guide to Operational Excellence*. 2nd edition. McGraw-Hill. (<a href="https://learning.oreilly.com/library/view/the-handbook-for/9780071799249/">https://learning.oreilly.com/library/view/the-handbook-for/9780071799249/</a>)

Pritchard, C. (2023). Risk Management Professional (PMI-RMP). Pearson education, Inc.

Ryall, J. & Kruithof, J. (2001). *The Quality Systems Handbook: Understanding and implementing Quality systems and ISO 9000 standard within the larger Quality framework.* Consensus Books, Australia.

#### Additional Reading

Kendrick, T. (2015). *Identifying and managing project risk:* essential tools for failure-proofing your project. Amacom.

Moon, J. (2022). Foundations of Quality Risk Management: A Practical Approach to Effective Risk-based Thinking. Quality Press.

Project Management Institute. (2017). *A guide to the Project Management Body of Knowledge*. 6th edition. Project Management Institute. Newtown Square, Pennsylvania. (https://learning.oreilly.com/library/view/a-quide-to/9781628256642/)

Rose, K. H. (2005). Project Quality Management: Why, What, and How. J. Ross Pub.

Smart, C. B. (2020). Solving For Project Risk Management: Understanding the Critical Role of Uncertainty in Project Management. McGrse-Hill. <a href="https://learning.oreilly.com/library/view/solving-for-project/9781260473841/">https://learning.oreilly.com/library/view/solving-for-project/9781260473841/</a>

Westcott, R. T. (2001). *The Certified Manager of Quality/ Organizational Excellence Handbook.* third edition. William A. Tony, USA.

Date: February 2025

# **Year 3 Modules**

# **BML301 Advanced Project Management**

**Module Code and Title:** BML301 Advanced Project Management

**Programme:** Bachelor of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Yeshey Wangmo

#### **General Objective**

This module aims to equip learners with the knowledge and skills to confidently manage projects in a hybrid work environment, integrating traditional project management practices with agile approaches. Students will delve into the concept of hybrid project management, exploring its advantages and how it can be applied to navigate complex projects. Learners will develop expertise in leading a hybrid team, utilize appropriate tools, and conduct effective project assessments in a hybrid environment. This module will prepare learners to be highly adaptable and well-equipped to lead successful projects, which are essential to thrive in the ever-evolving world of work.

# **Learning Outcomes**

On completion of the module, students will be able to:

- 1. explain the key concepts and characteristics of hybrid project management
- 2. differentiate between traditional, agile, and hybrid project management methodologies
- 3. identify suitable projects for hybrid project management
- 4. identify the suitability of different hybrid approaches based on project type and requirements
- 5. develop a hybrid project management plan
- 6. apply hybrid project management tools
- 7. demonstrate leadership and teamwork skills in a hybrid project environment
- 8. develop strategies for managing conflict and building trust
- 9. evaluate case studies as examples to elucidate the integration of hybrid approaches in projects
- 10. integrate emerging technologies and trends in hybrid project management

# **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours
	Facilitation and discussion	2	
Contact	In-class exercise, presentation and group work	1.5	60
	Guest Lectures	0.5	
Independent	Case Studies, Workshop and Reflection	2	60
study	Self-study	2	
Total		8	120

#### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

#### a. Quizzes (20%)

The students will take short quiz after the completion of each unit using the VLE platform to provide a more focused review of class topics to enhance their understanding of the content. Learning Outcomes (LO) 1, 2, 3, and 4 will be assessed by this assessment.

#### b. Reflective Journal (30%)

Each student will maintain a journal throughout the semester, making at least one entry per week to record and reflect on their thoughts and feelings as they explore their leadership style and adaptation to a hybrid work environment. Learning Outcomes (LO) 7 and 8 will be assessed by this assessment.

### Reflection Paper (20%)

Students will maintain a leadership journal that explores their leadership style, document their progress, challenges, and learning. Students will reflect on their experiences, identity gaps and describe actions taken to address the challenges. This will help the students to demonstrate their understanding of leadership concepts and provide an opportunity for them to continuously grow as leaders to effectively lead a hybrid team.

#### **Reflection Paper Assessment Criteria**

5 marks	Depth of Reflection: demonstrates thoughtful and critical engagement with the content;
	observation shows a deeper understanding of leadership concepts; and provides personal
	insights and connections to theoretical knowledge.
5 marks	Relevance and Application: reflects on different leadership styles, highlighting their strengths and

5 marks Relevance and Application: reflects on different leadership styles, highlighting their strengths and weaknesses; identifies personal leadership style and evaluates its adaptability to a hybrid work; identifies gaps based on self-analysis and relevant theories.

5 marks Action Taken and Progress: demonstrates leadership development and practice, adaptation strategy, challenges faced and a concluding comment on how the reflection will influence future actions

3 marks Consistency: demonstrate continuous engagement with the reflective process

2 marks Clarity and Organization: *well-structured paper with appropriate use of academic language, adherence to formatting guidelines, including proper citations and references.* 

### Presentation (10%)

Students will make a 5-minute video presentation that covers their leadership development journey. This presentation will be built on the insights and action plan outlined in the reflection paper.

#### **Presentation Assessment Criteria**

3 marks	Content and Structure: clearly introduces the topic, presents information in a logical order, and
	covers necessary aspects of the leadership development journey

3 marks Delivery: communicate clearly and confidently with appropriate pacing and tone; mannerisms, and demonstrate enthusiasm and passion for the topic.

4 marks Creatively: use creative visual aids to enhance the presentation or show creativity in the presentation format, design, and delivery.

3 marks Quality: video is of good technical quality with clear audio and video, avoid distracting background noise, and smooth transitions.

### c. Group Project (50%)

This assignment is a group task and carries a weightage of 50%. Students in a group of 4-5 members will work on developing a comprehensive project plan applying the hybrid project management approaches to make informed decisions. The team will then conduct an engaging workshop to present the plan, showcasing the practical application of hybrid methodologies, and therefore will be responsible for managing all the aspects of the project, from planning and development to execution and evaluation. Learning Outcome (LO) 5,6,9 and 10 will be assessed by this assessment.

# project Plan (20%)

Each group must develop a comprehensive project plan between 1000-1500 words that incorporates hybrid project management principles. It should clearly define project scope, objectives, deliverables, risks, and resources, using project management tools. A well-structured project plan will guide the team through the workshop, ensuring they can respond effectively to make informed decisions. The project plan will be assessed based on the criteria below.

#### **Project Plan Assessment Criteria**

2 marks Clarity and completeness: *well-structured and logically arranged, and includes all necessary components of project plan.* 

3 marks Business Case: clear description of the project with clearly stated objectives and scope.

3 marks	Project Plan: includes all the key processes, including schedule, resources, budget, risk, and communication
4 marks	Methodology: incorporation of appropriate project management methodology, justification of method adopted, and use of appropriate project management tools or templates.
4 marks	Project Deliverables: clearly defines key deliverables and introduces unique solutions or value- added strategies.
2 marks	Quality of Writing: well-written paper with proper grammar, appropriate use of academic language, adherence to formatting guidelines including proper citations and reference.
2 marks	Academic Integrity: Adherence to academic integrity standard and demonstrating originality in thoughts and analysis.

# Workshop/Seminar (25%)

Following the completion of the hybrid project management plan, the students and module tutor will organize a workshop. This workshop will serve as a platform for students to present their project plan, engage in interactive discussion and receive constructive feedback from peers and faculty members. External evaluators will be invited to assess the quality of presentation and provide expert guidance, ensuring academic rigor and relevance. The success of the workshop is closely tied to the thoroughness and clarity of the project plan developed by the team. The workshop will be assessed based on the criteria below.

### Workshop Assessment Criteria

**Or KSHOP	Assessment Ontena
5 marks	Teamwork and Collaboration: Demonstrates teamwork, collaboration, and adaptability
5 marks	Content and Research Quality: comprehensive research with credible sources and strong evidence, strong analytical insights with lof=gical reasoning, and effectively connects findings ti national/international context.
5 marks	Creativity and Innovative Solutions: demonstrates unique perspectives or fresh insights and proposes creative and feasible solutions to the issue presented.
5 marks	Presentation: clear, confident and engaging delivery, well-designed visual that enhances understanding, and appropriate language used.
3 marks	Audience Engagement: actively engages through discussion, and answers the questions with clarity and confidence.
2 marks	Time Management: well prepared, organized, and completes the presentation within allocated time

#### Peer Evaluation (5%)

Each student will evaluate their teammates' contributions to ensure fairness and accountability. The peer evaluation will include teamwork, communication, problem-solving, and leadership. The peer evaluation will be assessed out of 20 marks based on the following criteria and scaled down to 5%.

Peer evaluat	ion assessment criteria
4 marks	Commitment to group goals: consistently and actively works towards group goals
4 marks	Contribution of Knowledge: consistently and actively contributes information
4 marks	Collaboration: always offers to help group members
4 marks	Overall Engagement: actively engages in all aspects of team meetings, contributing positively to the team's progress and dynamics
4 marks	Attendance: Attends all the team meetings

# Overview of the assessment approaches and weighting

Continuous assessment	Are	as of assignments	Quantity	Weighting (%)
A (Theory)	a.	Quiz	2	20
	b.	Reflective Journal	1	20
	b.	Presentation	1	10
B (Practical)	C.	Project Plan	1	20
	C.	Workshop	1	25
	C.	Peer Evaluation	1	5
Total			100	

Pre-requisites: None

Subject Matter

# **Unit I: Introduction to Hybrid Project Management**

- 1.1. Definition and meaning hybrid project
- 1.2. Characteristics and manifesto of hybrid project management
- 1.3. Landscape of traditional, agile and hybrid project management
  1.3.1.Similarities and differences between traditional, agile and hybrid approach
- 1.4. Benefits and challenges of hybrid approaches
- 1.5. Hybrid Project Management Lifecycle
- 1.6. Roles and Characteristics of Hybrid Project Manager

# **Unit II: Hybrid Project Management Lifecycle**

- 2.1. Hybrid Project Types
- 2.2. Hybrid Project Management Plan
- 2.3. Launching a Hybrid Project
- 2.4. Project Planning and Structure
- 2.5. Project Execution
- 2.6. Project Closure

#### **Unit III: Hybrid Methodology**

- 3.1. Project Management Methods: Scrum; Kanban; Lean; Waterfall; Prince2; Stage Gates
- 3.2. Hybrid Project Management Framework
  - 3.2.1. Waterfall-Agile/ Agile-Waterfall Hybrid
  - 2.6.1. Scrum-Kanban (Scrumban)
  - 2.6.2. Lean-Agile Hybrid
  - 2.6.3. Agile-Stage Gate Hybrid
  - 2.6.4. Prince2-Scrum/Agile-Prince2 Hybrid
- 2.7. Project Management software and collaboration tools (Ms Project, Trello)
- 2.8. Methods for continuous Improvement in hybrid project management

#### Unit IV: Leadership and teamwork in Hybrid Projects

- 4.1. Hybrid Project Management Plan
- 4.2. Roles and key skills of hybrid team
- 4.3. Leadership styles and their impact on a hybrid project
- 4.4. Developing and leading a high-performing team
- 4.5. Conflict resolution and decision-making in a hybrid team
- 4.6. Ethical Considerations and Professional Responsibility
- 4.7. Effective leadership practices

### **Unit V: Hybrid Project Management in Practice**

- 5.1 Case studies on the application of hybrid project management (Tesla, Spotify, NASA Mars Rover, etc)
- 5.2 Common pitfalls and risk factors
- 5.3 Best Practices in implementing a hybrid approach
- 5.4 Outlook on future developments and trends in hybrid project management

# **Reading List**

#### **Essential Reading**

Dionisio, C. S. (2022). *Hybrid Project Management*. John Wiley & Sons, Inc., Hoboken, New Jersey. <a href="https://learning.oreilly.com/library/view/hybrid-project-management/9781119849728/">https://learning.oreilly.com/library/view/hybrid-project-management/9781119849728/</a>

Tolbert, M., & Parente, S. (2020). *Hybrid project management: Using agile with traditional PM methodologies to succeed on modern projects.* Business Expert Press.

Voss, F. J. (2023). Hybrid Project Management: The Secret to Superior Performance.

Wysocki, R. K. (2009). Effective Project Management: Traditional, Agile, Extreme, Hybrid. John wiley & Sons, Indiana.

# Additional Reading

Kuster, J., Bachmann, C., Hubmann, M., Lippmann, R, & Schneider, P. (2023). *Project Management Handbook: Agile-Traditional-Hybrid.* 

Project Management Institute. (2017). *A guide to the Project Management Body of Knowledge*. 7th edition. Project Management Institute. Newtown Square, Pennsylvania. https://learning.oreilly.com/library/view/a-quide-to/9781628256642/

Date: February 2025

# BML302 HRM & Leadership

Module Code and Title: BML302 HRM & Leadership

**Programme:** Bachelor of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Jamyang Dolkar

#### **General Objective**

The module will examine concepts, models, methods and styles of leadership and human resource management (HRM). Through this module, learners will explore the application of sociological and psychological theories in navigating aptly through the social and cultural dynamics of organizational behaviors to optimize their work environment. Learners will also examine various challenges in leadership and HRM that challenge diversity, equity and inclusiveness. Furthermore, the module will allow students to understand the essence and efficacy of applying emotional intelligence (EQ) in practicing effective management and becoming a valued leader.

#### **Learning Outcomes**

On completion of the module, students will be able to:

- explain the fundamental concepts and evolution of Human Resource Management (HRM).
- 2. identify managerial leadership skills and roles required for effective leadership.
- 3. evaluate the strengths and weaknesses of various organizational leadership models.
- 4. evaluate the Resource-based view, Strategic fit, and Bundling in SHRM.
- 5. demonstrate the process of orientation and onboarding through role-play activities.

- 6. develop strategies for collective bargaining, grievance handling, and labor-management cooperation.
- 7. evaluate strategies to promote diversity, equity, and inclusion (DEI) in organizations.

# **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours	
	Facilitation and discussion	2		
Contact	Case studies and Groupwork	1	60	
	Lecture	1		
Independent	Self-Study	2	60	
study	Assignments	2	60	
	Total	8	120	

### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

### a. Quiz (10%)

Following the completion of each unit, students will take a short quiz. This practice will support a more focused review of class topics and enhance their comprehension of the content. The quiz will be graded out of 10%.

# b. Individual Written Assignment (20%)

Students will write an analytical essay that comprehensively explores the essence and practice of Human Resource Management (HRM), as well as the fundamentals of leadership. They will examine the criticisms faced by HRM and assess the importance of HRM theories. Additionally, students will identify diverse models defining HRM and other operational processes, and discuss the significance of HRM policies, programmes, and plans. The assignment should be between 1500-2000 words and submitted individually. The written assignment will assess learning outcomes 1,2 and 3.

# **Written Assignment Assessment Criteria**

- 4 marks Organization of thoughts and arguments: Presentation is logically structured with a clear introduction and conclusion. Arguments are well-sequenced, and transitions between points are smooth and coherent, enhancing the clarity and flow of ideas.
- 8 marks Depth of analysis: Demonstrates strong comprehension of the subject through a thorough examination of theories and concepts. Critical evaluation is evident, with well-supported arguments, insightful interpretations, and a balanced discussion of different perspectives.
- 4 marks Integration of theoretical concepts with practical examples: Theoretical concepts are effectively linked to relevant real-world examples, case studies, or experiences. Practical applications reinforce understanding and demonstrate the ability to contextualize knowledge.

4 marks Grammar and Mechanics: Language is clear, fluent, and free from grammatical, spelling, and punctuation errors. Writing style enhances readability and professionalism, ensuring effective communication of ideas. The sources are acknowledged and cited as per APA guidelines.

# c. Group Project; Case study of HRM issues (30%)

The objective of this assignment is for students, working in groups of 5-6 members, to conduct an in-depth analysis of various Human Resource Management (HRM) issues within a chosen company/organization/private enterprise. Each group is required to obtain approval from the selected company/organization/private enterprise. this case study will assess learning outcomes 3,4, 6 and 7. The students will submit a written report and give class presentation focusing on the following HRM issues:

- Culture of Interpersonal relationship/team leadership
- Strategic Human Resource Management
- Recruitment and Selection Process
- Training and Development
- Performance Appraisal
- Benefit Plan

The report should provide a detailed insight into each HRM issue analyzing its current state and propose potential improvement strategies. Following the completion of the report, groups will deliver a class presentation summarizing their findings and proposals.

### **Group Project Assessment Criteria**

- 15 marks Thorough analysis of each HRM issue: Demonstrates a deep and comprehensive understanding of each HRM issue. Analysis includes evaluation of existing practices, identification of strengths and weaknesses, and discussion of their implications within the chosen company/organization.

  Arguments are well-supported with relevant data, theories, and real-world examples.
- 6 marks Proposed strategies for improvement: Improvement strategies are practical, well-founded, and tailored to the specific context of the organization. Recommendations are backed by logical reasoning, industry best practices, and relevant HRM frameworks, demonstrating feasibility and potential impact.
- 4 marks Clarity, coherence, and professionalism: *The report is well-structured, with clear, logical, and coherent arguments. Language is professional, concise, and free from grammatical errors. The report follows appropriate formatting and citation guidelines, ensuring a high standard of presentation.*
- 5 marks Presentation: Presentation is well-organized, engaging, and effectively summarizes key findings and recommendations. Delivery techniques (eye contact, voice modulation, confidence, and body language) enhance audience engagement. Visual aids, such as slides or infographics, are used appropriately to reinforce key points.

#### d. Aligning HR process with Organizational Strategy (40%)

Students will develop a strategic HRM transformation plan integrating elements of Strategic Human Resource Management (SHRM) and HRM processes to align HR practices with organizational goals. Through analysis of the external environment, internal capabilities, and strategic objectives, they will identify HR priorities and

initiatives supporting long-term goals, considering factors such as workforce planning, talent management, and employee engagement. Students will redesign core HR processes to align with organizational strategic objectives, while collecting data on metrics such as turnover and productivity. In the final presentation, students will summarize their plan and submit a reflective report detailing individual contributions and lessons learned. This assignment will assess learning outcomes 4,6 and 7.

# Aligning HR process with Organizational Strategy Assessment Criteria

- 5 marks Organizational analysis (Key HR priorities and initiatives): Demonstrates a clear understanding of the organization's strategic objectives, external environment, and internal capabilities.

  Identifies key HR priorities and initiatives that align with long-term business goals. Analysis is well-supported with relevant data, industry insights, and HR frameworks.
- 10 marks Strategic HRM plan development: Develops a comprehensive and well-structured HRM transformation plan integrating Strategic Human Resource Management (SHRM) principles. The plan effectively aligns HR practices with organizational strategy, incorporating elements such as workforce planning, talent management, and employee engagement. Strategies are feasible, well-reasoned, and tailored to the organization's needs.
- 10 marks Data collection and redesign: Gathers and analyzes relevant HR metrics, such as employee turnover, productivity, and engagement. Uses data-driven insights to inform HR process redesign, ensuring alignment with organizational objectives. Redesign proposals are well-justified and demonstrate an understanding of best practices in HRM.
- 5 marks Presentation: Presentation is well-structured, engaging, and effectively communicates the strategic HRM transformation plan. Delivery techniques (eye contact, voice modulation, confidence, and body language) enhance audience engagement. Visual aids, such as slides or infographics, are used effectively to reinforce key points.
- 10 marks Reflection: Provides a thoughtful and well-articulated reflection on the project, detailing individual contributions, challenges faced, and lessons learned. Demonstrates personal growth, teamwork, and an understanding of the practical application of HRM concepts in a real-world setting.

# Overview of the assessment approaches and weighting

Continuous assessment	Areas of assignments	Quantity	Weighting (%)
A (Theory)	a. Quiz	1	10
	b. Individual written Assignment	1	20
Practical	b. Case Study	1	30
	c. Aligning HR process	1	40
Total		100	

Pre-requisites: None

Subject Matter

Unit I: Essence of Human Resource Management (HRM)
1.1. Introduction to Human Resource Management (HRM)

- 1.2. Fundamental Concepts and Evolution of HRM
- 1.3. Criticisms Faced by HRM
- 1.4. Theories Associated with HRM and Their Importance
- 1.5. Models Defining HRM and Their Operational Processes
- 1.6. HRM Policies, Programmes, and Plans

#### Unit II: Leadership Theories and Model

- 2.1 Leadership and Essential Leadership Skill
- 2.2 The Five Key Elements of Leadership
- 2.3 Managerial Leadership Skills and Competencies
- 2.4 Managerial Roles Required for Effective Leadership
- 2.5 Application of Leadership Theories and Models
- 2.6 Methods for Analyzing Leadership Theories

#### Unit III: People, Organization, and Leadership

- 3.1. Organizational Behaviour and Organizational Leadership
- 3.2. Psychological and Sociological Theories of Organizational Behaviour
- 3.3. Organizational Functioning and Culture Development
- 3.4. Strengths of Various Organizational Leadership Models
- 3.5. The Role of Emotional Intelligence (EQ) in Leadership and Organizations

# Unit IV: Strategic Human Resource Management (SHRM)

- 4.1 Importance of Strategic Human Resource Management (SHRM)
- 4.2 Conceptual Basis of SHRM
- 4.3 Fundamental Characteristics of HRM Strategy
- 4.4 Strategic Theories: Resource-Based View, Strategic Fit, and Bundling
- 4.5 The Three Perspectives of Delery and Doty
- 4.5 Implementation of Effective HR Strategies

#### Unit V: Recruitment and Selection in HRM

- 5.1. The Recruitment and Selection Process in HRM
- 5.2. Importance and Strategies for Recruitment and Selection
- 5.3. Strategies and Techniques for the Recruitment Process
- 5.4. Legal Framework for Recruitment: Citizens and Expatriates
- 5.5. Developing Selection Criteria for Hiring
- 5.6. Conducting Interviews: Types and Best Practices
- 5.7. Selection Models and Their Application
- 5.8. Orientation and Onboarding in HRM

#### **Unit VI: Talent Management and Employee Development**

- 6.1. The Talent Management Process in HRM
- 6.2. Motivation Strategies: Herzberg, Maslow, and Alderfer Theories
- 6.3. Learning Theories and Their Impact on Employee Performance
- 6.4. Stages of Training in HRM and Their Importance
- 6.5. Compensation Plans and Organizational Needs
- 6.6. Pay Systems and Theories: A Case Study Approach
- 6.7. Emotional Intelligence in Workplace Communication
- 6.8. Performance Management Systems (PMS): Strengths and Weaknesses

6.9. Labour Relations: Collective Bargaining, Grievance Handling, and Cooperation

6.10. Workplace Safety Strategies for a Productive Organizational Culture

#### Unit VII: Ethics and Responsibility in Human Resource Management

- 7.1. Ethical Principles in HRM and Promoting Diversity, Equity, and Inclusion
- 7.2. Ethical Theories in HRM: Deontology, Utilitarianism, Stakeholder Theory, and Discourse Theory
- 7.3. Strategies to Address Power, Privilege, and Enhance Inclusion
- 7.4. Ethical Policies in HRM Processes
- 7.5. Diversity Models and Their Application in HRM
- 7.6. Overcoming Resistance to Diversity for Employee Engagement and Retention

# **Reading List**

#### **Essential Reading**

- 1. Bratton, J., & Gold, J. (2024). Human resource management (7th ed.). Bloomsbury.
- 2. Dessler, G. (2023). Human resource management (17th ed.). Pearson.
- 3. Kouzes, J. M., & Posner, B. Z. (2023). *The leadership challenge: How to make extraordinary things happen in organizations* (7th ed.). Wiley.
- 4. Northouse, P. G. (2025). Leadership: Theory and practice (10th ed.). SAGE Publications.
- 5. Ulrich, D., Younger, J., Brockbank, W., & Ulrich, M. (2012). *HR from the outside in: Six competencies for the future of human resources*. McGraw-Hill.
- 6. Wilton, N. (2016). *An introduction to human resource management* (3rd ed.). SAGE Publications.

# **Additional Reading**

Belcourt, M., & Podolsky, M. (2019). *Strategic human resources planning* (7th ed.). Nelson Education.

Colquitt, J. A., LePine, J. A., & Wesson, M. J. (2021). *Organizational behavior: Improving performance and commitment in the workplace* (7th ed.). McGraw-Hill Education.

Falcone, P. (2022). *Effective hiring: Mastering the interview, offer, and onboarding.* HarperCollins Leadership.

Chamorro-Premuzic, T. (2017). The talent delusion: Why data, not intuition, is the key to unlocking human potential. Piatkus.

Date: February 2025

# **CRD302 Deep Domain Mini Project**

Module Code and Title: CRD302 Deep Domain Mini Project

Programme: Bachelor of Economics and Political Science & Bachelor of Digital

Communications and Project Management

Credit: 12

Module Tutor(s): Phub Dem

#### **General Objective**

This module enables students to apply their foundational knowledge and analytical skills developed during their first- and second-year studies. Students will conduct a research-based mini-project that investigates relevant issues in economics, political science, or project management and digital communication. The project will involve policy evaluation, economic analysis, or theoretical exploration of a contemporary issue, fostering

critical thinking and research skills. They will engage in data analysis, policy evaluation, or theoretical exploration to propose evidence-based solutions or interpretations. Students will work in small groups, engaging in structured inquiry, data analysis, and presentation of findings.

# **Learning Outcomes**

On completion of the module, students will be able to

- 1. define project objectives, stakeholders, and expected outcomes.
- 2. develop a structured project proposal with risk management and resource allocation strategies.
- 3. apply research methodologies and project management principles effectively.
- 4. analyze economic, political, or project management data using qualitative and/or quantitative techniques.
- 5. address research challenges and implement adaptive solutions.
- 6. communicate research findings effectively in written and oral formats.
- 7. evaluate project outcomes against predefined success criteria.

# **Learning and Teaching Approach**

Туре	Approach	Hours per week	Total credit hours
	Proposal Writing	2	
Contact	Mid-term progress review	1	60
	Project seminar	1	
Independent study	Data collection and analysis	2	
	Report writing	1	60
Judy	Self-directed learning	1	
			120

#### **Assessment Approach**

The assessment will be carried out on a continuous basis through the following approaches:

#### a. Project Proposal (20%)

Students, in groups of 3 will prepare a proposal for their project based on their area of interest. The proposal should consist of a comprehensive overview of the project outlining objectives, scope, and execution plan. The proposal will be assessed using the following criteria.

# **Assessment Criteria**

6 marks	Clarity and relevance of project topic and objectives
6 marks	Justification, depth of literature review and quality of sources
5 marks	Data collection process and ethical considerations
3 marks	Clarity, organization, innovation, and formatting.

# b. Mid-term Progress Review (Presentation) (20%)

In the same group, the students will prepare a midterm progress presentation of 15–20 minutes. The midterm progress review presentation for project management should include project progress, identify challenges, and set revised plans for successful project completion.

#### Mid-term Progress Review Assessment Criteria

8 marks Explanation of data collection and preliminary findings

6 marks Discussion of challenges and solutions.

6 marks Project progress assessment and revised project plan.

# c. Final Project Report (40%)

A final project report will be produced presenting the entire project cycle, including introduction, literature review, methodology, findings, and conclusion.

#### **Final Project Report Assessment Criteria**

20 marks Comprehensive analysis and well-structured discussion.

10 marks Logical conclusions and policy implications.

5 marks Proper referencing and adherence to academic standards.

# d. Project Seminar (20%)

Students A class seminar of the mini project will be done upon completion of the project. The students will do a 10-minute group presentation, followed by 5 minutes of question-and-answer session.

# **Project Seminar Assessment Criteria**

10 marks5 marksClarity, coherence, and conciseness.

5 marks Engagement in a question-and-answer session.

#### Overview of the assessment approaches and weighting

Continuous assessment	Areas of assignments	Quantity	Weighting (%)
Practical	a. Project Proposal	1	20
	b. Mid-term Progress Review (presentation)	1	20
	c. Final Project Report	1	40
	d. Project Seminar	1	20
Total		10	00

Pre-requisites: None

**Subject Matter** 

#### Phase 1: Project Conceptualization & Planning

- 1.1. Identifying a topic and formulating research questions.
- 1.2. Conducting a background study and justifying the significance of the research.
- 1.3. Developing SMART research objectives.
- 1.4. Selecting appropriate research methodology
- 1.5. Define data collection techniques
- 1.6. Drafting a project proposal outlining the project plan, timeline, and resource needs.
- 1.7. Identifying stakeholders and project deliverables.

#### Phase 2: Research & Data Collection

- 2.1. Conducting a literature review to gather relevant information.
- 2.2. Collecting primary or secondary data from credible sources.
- 2.3. Applying ethical research practices and ensuring data accuracy.
- 2.4. Maintaining organized documentation of research findings and sources.
- 2.5. Project Management
  - 2.5.1. Develop a research plan with scheduled tasks and milestones.
  - 2.5.2. Allocate tasks among group members based on expertise and interests.
  - 2.5.3. Manage time effectively to ensure steady progress.

#### Phase 3: Analysis & Evaluation

- 3.1. Analyzing data and interpreting findings.
- 3.2. Applying appropriate analytical tools (qualitative or quantitative) to analyze data.
- 3.3. Interpreting findings in relation to theoretical and empirical literature.
- 3.4. Evaluating policies, economic trends, or political structures based on data.
- 3.5. Evaluating project findings against established theories or policy frameworks.
- 3.6. Addressing research challenges and proposing solutions.
- 3.7. Ensuring quality management techniques to validate research findings.

#### Phase 4: Presentation & Documentation

- 4.1. Producing a well-structured project report with academic citations and appendices.
- 4.2. Communicate findings clearly using appropriate academic conventions.
- 4.3. Present research using visual aids (graphs, tables, infographics, policy briefs).
- 4.4. Developing visual aids (graphs, charts, infographics) to present data.
- 4.5. Delivering a structured oral presentation summarizing key insights.
- 4.6. Reflecting on project experiences and identifying lessons learned.
- 4.7. Communicating effectively using academic writing conventions.

#### **Reading List**

#### **Essential Reading**

Berkun, S. (2005). The Art of Project Management. O'Reilly & Associates.

Mankiw, N. G. (2020). *Principles of Economics*. Cengage Learning.

Hague, R., & Harrop, M. (2019). Comparative Government and Politics: An Introduction. Macmillan.

Bryman, A. (2021). Social Research Methods. Oxford

#### **Additional Reading**

Wooldridge, J. M. (2019). Introductory Econometrics: A Modern Approach. Cengage Learning.

Policy Analysis: Bardach, E., & Patashnik, E. M. (2020). A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving. CQ Press.

Date: January 2025

# **CRD301 Advance skills for Career Development**

Module Code and Title: CRD301 Advance skills for Career Development Programme: Digital Communication and Project Management

Credit: 12

Module Tutor(s): Sangay Choden

# **Learning Objective:**

This module aims to provide students with career advice and specific guidance on winning and surviving in the ever-changing world of job search. Unlike the traditional approach to the job market where job-searching is the priority, this module will help job seekers understand themselves first, then find the jobs that use their transferable skills in their preferred subjects, fields, or specialization. The module emphasizes the mastering of job search skills by exposing students to internet-based job-search techniques and resources, updated social media advice for job-search, and effective interview and negotiation skills.

# **Learning Outcome**

On completion of the module, students will be able to:

- 1. identify and articulate their strengths, skills, and areas of expertise.
- 2. display adeptness in professional communication and skillfully broaden one's network in the professional sphere.
- 3. Create and sustain a compelling online personal brand that proficiently conveys one's professional identity.
- 4. develop a professional and healthy online presence, including an updated LinkedIn profile.
- 5. craft an impressive CV and video resume that highlight their qualifications and achievements.
- 6. employ effective strategies for job hunting that align with their skills and career goals.
- 7. demonstrate proficiency in using internet-based job search techniques and resources to find relevant job opportunities.
- 8. acquire knowledge about the various types of jobs available in their preferred subjects, fields, or specialization.
- 9. prepare and excel in job interviews by demonstrating effective communication and interpersonal skills.
- 10. understand the art of negotiation, including identifying negotiable items in job offers and conducting successful negotiations.

# **Learning and Teaching Approach:**

The module will be predominantly taught using a student-centered approach such as practical exercises and activities, group work (discussions, problem-solving activities, collaborative and individual assignments, and peer feedback), and self-directed learning. For explaining theories and concepts of career development, lectures and teaching sessions will be implemented.

Туре	Approach	Hours per week	Total credit hours
	Lectures and discussion	1	
Contact	In-class exercises and group discussion	2	60
	Presentations	1	

Independent study	Identifying key career development strategies and techniques.	1.5	
	Preparation for in-class participation (e.g., mock interviews, CV writing, networking exercises)	2	60
	Self-study (resume building, research on employability trends)	0.5	
Total		8	120

### a. Draft CV, Final CV, and Cover Letter (15%)

Students will spend three weeks writing and refining their CVs and cover letters, ensuring they include all necessary sections, adhere to proper formatting, incorporate relevant keywords, and highlight key competencies. Additionally, students will learn to tailor their CVs to specific job requirements.

#### Draft CV, Final CV, and Cover Letter Assessment criteria

4 marks Inclusion of Necessary Sections
 3 marks Adherence to Proper Formatting
 3 marks Incorporation of Relevant Keywords
 2 marks Highlighting Key Competencies
 3 marks Tailoring to Specific Job Requirements

#### b. Draft Video Resume and Final Video Resume (15%)

Students will develop an approximately 1-2 minute video resume showcasing their skills and experiences to potential employers. The draft video will be presented in class for peer feedback and evaluation. Based on the feedback received, students will refine their draft video to create a final version for submission.

### Draft Video Resume and Final Video Resume Assessment criteria

4 marks
3 marks
4 marks
4 marks
4 marks
5 Creativity and Engagement
4 marks
7 Creativity and Engagement
8 Technical Quality and Editing

#### c. Mock Interview and Reflection (20%)

Students will participate in a mock interview designed to simulate a real-life scenario, providing valuable learning opportunities. The tutor will select a job role theme and compile a list of common interview questions relevant to that role. Students will be divided into groups, with each group assigned roles as interview panelists or interviewees, rotating positions for peer evaluation. Following the mock interview, students will write a reflective analysis of their experience.

#### **Mock Interview and Reflection Assessment criteria**

4 marks Preparation and Knowledge 5 marks Interview Performance 3 marks Role in the Interview

2 marks Peer Evaluation and Feedback

6 marks Reflective Analysis

# d. Digital Portfolio (20%)

Students will curate and maintain portfolios on LinkedIn throughout the semester, incorporating various components such as their CV, Video Resume, reflections, and reports from case studies. Additionally, they may include other activities showcasing their competencies as job seekers, demonstrating to potential

employers their capability to add value with their skills.

# **Digital Portfolio Assessment Criteria**

5 marks	Portfolio Content and Components
4 marks	Organization and Navigation
4 marks	Professionalism and Presentation
4 marks	Relevance and Value
3 marks	Engagement and Interactivity

# **Employer Perspectives on Employability: A Case Study (20%)**

Students will conduct a case study focusing on employer perspectives on employability, aiming to understand the factors and criteria employers consider when evaluating potential employees. They will interview employers from various industries to gather insights into the skills, qualities, and experiences that are highly valued in the workplace. Students will analyze the data collected and present their findings and recommendations for enhancing employability.

# **Case Study Assessment Criteria**

4 marks	Case Study Design and Execution
5 marks	Interview Process and Insights
4 marks	Data Analysis and Findings
4 marks	Recommendations for Enhancing Employability
3 marks	Presentation and Communication

#### f. **Group presentation of Case Study (10%).**

In a group presentation, students will collaboratively present their findings from the case study on employer perspectives on employability. Each group will summarize the key findings, insights, and recommendations from the case study interviews. Presentations should be engaging, well-organized, and effectively communicate the group's analysis and conclusions to the audience.

#### **Group presentation Assessment Criteria**

4 marks	Content and Key Findings	4%
3 marks	Insights and Recommendations	3%
3 marks	Presentation Skills	3%

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assignments	Quantity	Weighting (%)
	a. Draft CV, Final CV, and Cover Letter	1	15
	b. Draft Video Resume and Final Video Resume	1	15
	c. Mock Interview and Reflection	1	20
(Practical)	d. Digital Portfolio	1	20
	e. Employer Perspectives on Employability: A Case Study	1	20
	f. Group presentation of Case Study	1	10
Total			100

Pre-requisites: None

Subject Matter

#### Unit I: World of Job Search

- 1.1. Master the job search skills
- 1.2. Understand the job market.
- 1.3. Locate and access occupational and career information.
- 1.4. Develop a strategic job search plan to find jobs that are relevant to their skills and specialization.
- 1.5. Identify skills employers demand from students moving into the job market.
- 1.6. Identify personal and essential employable skills matched to a target job.
- 1.7. Explore internship opportunities to gather insights into the skills, qualities, and experiences that are valued in the workplace

# **Unit II: Building a Personal Brand**

- 2.1. Acquire skills for personal branding.
- 2.2. Define personal branding
- 2.3. Identify the target audience
- 2.4. Apply storytelling elements to build a strong personal brand.
- 2.5. Create a personal brand
- 2.6. Promote personal brand

#### **Unit III: Professional Online Presence**

- 3.1. Build a strong online presence.
- 3.2. Magnify skills through social media platforms.
- 3.3. Understand the concept of online presence for professional purposes.
- 3.4. Recognize the essentials of a good online profile.
- 3.5. Create or update professional profiles on social media.
- 3.6. Discover online platforms such as LinkedIn and Twitter to build a professional persona.
- 3.7. Evaluate their online presence for employability.
- 3.8. Update their LinkedIn profile, so recruiters could find them.

# **Unit IV: Curriculum Vitae**

- 4.1. Format, order and style CV
- 4.2. Understand the key components of a curriculum vitae (CV) and a resume
- 4.3. Describe qualifications/experiences and tailor CV according to the job requirements
- 4.4. Apply right keywords and organizational values appropriately and check for errors
- 4.5. Produce a scannable/electronic CV (Applicant Tracking System)
- 4.6. Write an effective cover letter.

# Unit V: Video Resume

- 5.1. Create a video resume
- 5.2. Present their skills and experience in a unique and convincing way.
- 5.3. Understand the power of video, speak confidently in front of a camera and create a professional video resume.
- 5.4. Identify the needs of the employer and demonstrate their skills as the perfect candidate for a specific iob.
- 5.5. Market themselves by incorporating storytelling elements to stand out from other candidates.
- 5.6. Edit the recorded footage and publish it online.

# Unit VI: Portfolio via Linkedin

- 6.1. Create a professional portfolio
- 6.2. Learn the key features of the Linkedin
- 6.3. Create the profile
- 6.4. Manage the profile
- 6.5. Showcase the sample works to potential employers.

#### **Unit VII: Job Interview**

- 7.1. Learn and use effective strategies to handle interviews.
- 7.2. Prepare for competency-based interview questions (before, during, and after the interview)
- 7.3. Understand common types of interview.
- 7.4. Know what questions to ask and how to record the answers.
- 7.5. Learn the soft skills required to perform the interviews successfully.
- 7.6. Learn how to make the best use of words and apply established tactics to get maximum results in interview conversations
- 7.7. Apply right negotiation skills.
- 7.8. Handle unexpected questions and situations.
- 7.9. Send thank-you notes and follow-up emails.
- 7.10. Demonstrate the mock interview

#### Unit VIII: Professionalism

- 8.1. Evaluate their own professional image and curate a compelling professional identity.
- 8.2. Learn the foundations for professionalism.
- 8.3. Apply critical thinking, problem-solving, and emotional intelligence.
- 8.4. Demonstrate professional leadership capabilities.
- 8.5. Identify professional opportunities or challenges and devise strategies to respond using an evidence-based approach.
- 8.6. Apply Presentation etiquette.
- 8.7. Demonstrate the ability to critically communicate

# Unit IX: Building a professional network

- 9.1. Identify and practice effective networking strategies.
- 9.2. Know where to meet professionals.
- 9.3. Acquire skills to reach out to professionals online.
- 9.4. Grow their influence using tools and platforms online.
- 9.5. Develop the right skills to talk and interact with people.

#### **Reading List**

#### **Essential Reading:**

L Jackson, A., & Geckeis, C. K. (2003). *How to prepare your curriculum vitae*. McGraw-Hill.

Nagy, Z. (2019). Soft skills to advance your developer career. Apress.

Sonmez, J. Z. (2015). Soft skills: The software developer's life manual. Shelter Island.

Tsitoara, M. (2020). Beginning Git and GitHub: A comprehensive guide to version control, management, and teamwork for the new developer. Apress.

Utecht, J. (2010). Reach: Building communities and networks for professional development. Lulu. com.

#### Additional Reading:

Bolles, R. N., & Brooks, K. (2021). What colour is your parachute? Job-Hunter's workbook: A companion to the world's most popular and bestselling career handbook (6<sup>th</sup> ed.). Tan speed press.

Kennedy, A. (2020). Creating a compelling video resume.

https://www.linkedin.com/learning/creating-a-compelling-video-resume.

Vanderslice. J. (2021). Building a strong personal brand: Merging psychology with technology. Tablo Pty Ltd.

https://ebookcentral.proquest.com/auth/lib/sherubtsebt/login.action?userName=Guest\_3fddf67c17a64d09888 0bb840020557b&userId=-1&userTypeID=34861&UserState=GUEST

Proquest Ebook central has lots of books that can use both as a text and ways for students to do some desk research.

https://open.umn.edu/opentextbooks/textbooks/six-steps-to-job-search-success

Search one open source

Date: January 2025

# **CRD303 Professional Certification (Deep Domain Specialization)**

Module Code and Title: CRD303 Professional Certification (Deep Domain Specialization)

Programme: Bachelor of Digital Communication and Project Management

Credit: 12

Module Tutor(s): Phub Dem

# **General Objective**

This module enables students to obtain the **Certified Associate in Project Management (CAPM)** certification, which is recognized globally and is essential for entry-level project management roles. The module focuses on providing students with knowledge of project management fundamentals, agile frameworks, predictive methodologies, and business analysis techniques. Students will engage in self-directed learning and online certification courses, while receiving guidance through mock exams and practical sessions to ensure they successfully complete the certification process.

# **Learning Outcomes**

On completion of the module, students will be able to:

- 1. understand the core principles of project management and its application across different methodologies.
- 2. demonstrate proficiency in the predictive plan-based approach to project management.
- 3. understand and apply agile methodologies in appropriate project scenarios.
- 4. gain insights into business analysis frameworks and their impact on project management.
- 5. apply professional project management strategies in real-world contexts.
- 6. successfully complete CAPM certification exams and gain industry-recognized credentials.

# **Teaching Methods/Learning Tasks:**

This module is designed for self-directed learning, where students are encouraged to take ownership of their learning. The students will enrol in online certification courses and mock exams offered by certified institutes. Additionally, two hours of lab period will be allocated for the students to practise and discuss these courses. Two mock tests will be conducted before the students appear for CAPM to ensure students clear the exam on time. The tutor will provide guidance and support to the students in various aspects, including:

- Assisting students in identifying preparatory online courses
- Aiding in completing registration forms and coordinating fee payments for the course
- Facilitating self-directed study and ensuring completion of prescribed certification requirements.
- Offering strategies for scheduling and preparing for certification examinations effectively.
- Recommending resources and mock tests to aid in preparation for the certification exam.
- Assisting students in navigating certification course platforms and accessing relevant materials.
- Monitoring student progress and providing consultations on a weekly basis if necessary.

The college will cover the fees upon submission of valid registration forms. However, students must successfully fulfil the prescribed certification requirements, including scheduling and appearing for examinations, within the semester to meet module requirements. If students fail to obtain the certificate, they will be responsible for covering the associated cost.

**Learning and Teaching Approach** 

Approach	Hours per week	Total credit hours
Independent study	6	90
Lab	2	30
Total		120

# **Assessment Approach**

The assessment will be based on successful completion of the CAPM certification exam:

• **Certification Exam (100%)**: Students must complete the prescribed certification exams within the semester and submit their certificates as proof of completion.

#### **Subject Matter**

### **Unit 1: Project Management Fundamentals and Core Concepts**

- 1.1 Understand the five project management process groups and processes.
- 1.2 Explore project life cycles and management strategies.
- 1.3 Develop skills in planning, execution, and problem-solving.
- 1.4 Understand governance, ethics, strategy, and planning.
- 1.5 Understand Organizational Project Management.
- 1.6 Understand and apply PMI standards to ensure effective and alignment with best practices.
- 1.7 Understand Program and Portfolio Management.

# **Unit 2: Predictive Plan-Based Methodologies**

- 2.1 Determine when to apply predictive, plan-driven methodologies based on project complexity, scope, and timeline.
- 2.2 Develop comprehensive project plans, schedules, and control documentation, while applying informed decision-making strategies to guide execution and address challenges.
- 2.3 Demonstrate an understanding of project operation and execution processes such as managing resources, engaging stakeholders, mitigating risks, controlling costs, and implementing change management processes to ensure project alignment and achievement of goals.
- 2.4 Utilize Earned Value Management (EVM) techniques to assess project performance and progress in terms of cost, schedule, and scope.

#### **Unit 3: Agile Frameworks and Methodologies**

- 3.1 Understand when to use adaptive approaches for project management.
- 3.2 Develop adaptive project plans and document project controls for agile projects.
- 3.4 Plan project iterations and determine how to document project controls for an adaptive project.
- 3.5 Explain the components of an adaptive plan.
- 3.6 Determine how to prepare and execute task management steps.
- 3.7 Explore organizational agility.

# **Unit 4: Business Analysis Framework**

- 4.1 Demonstrate an understanding of business analysis (BA) roles and responsibilities.
- 4.2 Determine how to conduct stakeholder communication.
- 4.3 Determine how to gather requirements.
- 4.4 Demonstrate an understanding of product roadmaps.

- 4.5 Determine how project methodologies influence business analysis.
- 4.6 Validate requirements through product delivery.

#### **Reading List**

# **Essential Reading**

PMI (2021). A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – 7th Edition. Nielsen, K., Favrot, J.-L., & Marucci, G. (2024). *Mastering the new PMI Certified Associate in Project Management (CAPM) exam (2023 version)*. Taylor & Francis.

Kanabar, V., Thomas, A. P., & Lechler, T. (2023). *Certified Associate in Project Management (CAPM)® Exam Official Cert Guide*. Pearson IT Certification.

#### Additional Reading

Meredith, J. R., & Mantel, S. J. (2017). Project Management: A Managerial Approach (9th ed.). Wiley.

Date: January 2025

# CRD304, Deep Experiential: Industrial Capstone Project

Module Code and Title: CRD304, Deep Experiential: Industrial Capstone Project

Programme: Digital Communications and Project Management

Credit: 36

Module Tutor(s): Dr. Yezer

**General Objective** 

This capstone project aims to provide students with the opportunity to apply and integrate the knowledge and skills acquired in the earlier modules. The time frame of the project is 12 weeks. Students will work on a real-world project, taking it from initiation to completion, demonstrating their mastery of project management concepts and techniques. The capstone project helps students to apply the knowledge and skills learned from different topics offered in the programme. The project will involve research, analysis, problem-solving, creative work and demonstrate their skills to solve real world problems. The successful submission of a project report and presentation of their project is a strong indicator of Project Management repertoire in a student. The semester-long project is equivalent to three modules of 36 credits.

# **Learning Outcomes:**

On completion of the capstone project, students will be able to:

- 1. demonstrate the ability to effectively identify a suitable project for the capstone and develop a comprehensive project charter, including the definition of project scope and objectives.
- 2. carry out literature research and summarise the state of the art.
- 3. create a detailed project management plan that includes scope definition, schedule development, cost estimation, risk analysis, and communication strategies.
- 4. apply best practices in executing a project plan in the real world situation, including resource coordination, stakeholder engagement, and team management to achieve project objectives.
- 5. develop skills to monitor project progress, manage changes, and maintain quality control throughout the project lifecycle.
- 6. demonstrate their ability to manage project closure effectively, including preparing comprehensive documentation, conveying information clearly, and producing user-friendly outputs.

#### **Teaching Methods and Learning Approach:**

Project Coordinator – Capstone Project Committee (CPC) consists of the Head of Department (HoD), Programme Leader (PL), and Supervisors. The Programme's PL will serve as a capstone project coordinator and is responsible for administrative aspects of the project, such as creating a project work plan, designing templates and rubrics for proposals, and chairing presentation seminars. Towards the end of year 3, semester I, the coordinator shall convene a meeting with the CPC members to discuss the modalities of the capstone project, such as finding projects, nominating a supervisor, and other project-related activities. With support from the HoD, the coordinator will liaise with other organisations and agencies for related Project Management projects that students can take up as capstone projects. Students will also be encouraged to find projects worth working on as capstone projects. However, the project should be relevant to the Project Management programme or related to some aspects of Project Management. The coordinator shall present a working report to the CPC members during the autumn semester's closing meeting to ensure that the number of projects is adequate and aspects of the capstone project are in place.

**Supervisor** – Student(s) will work under the supervision of a faculty member(s) (supervisor) nominated by the CPC. The supervisor guides the student's project and provides timely feedback on all graded and ungraded components. It is worth noting that the supervisor need not have a background or subject knowledge of the project undertaken by a student. Furthermore, the supervisor will report students' progress or related matters to the coordinator and to the CPC timely.

Students must meet with their supervisor at least once a week to update them on their work progress and resolve any issues that may impede the project's advancement. The supervisor and students can determine the modalities for assessing the project's status, such as weekly meetings and demo presentations. However, these arrangements should remain consistent across all student teams.

Students will work in teams of five to six members and will engage in regular meetings with their project supervisor, typically scheduled weekly. Additionally, dedicated face-to-face consultation sessions will be held each week to support students and ensure their work adheres to module requirements. During these consultations, students can exchange ideas and clarify any project-related uncertainties.

While students will primarily work autonomously, the supervisor will provide guidance to ensure the correct procedures are followed in achieving the project's objectives. Self-directed sessions will also allow students to explore additional research and knowledge necessary for delivering a comprehensive project solution.

# **Learning and Teaching Approach**

Туре	pe Teaching and Learning approaches Hours per week		Total Credit Hours	
Contact	Lecture, Supervision and Guidance of project	1	15	
Independent study			345	
	Total	•	360	

# Assessment Approach

The Capstone Project has four assessment components in which the component A and B will be assessed by the supervisor and the component D will be assessed by both the external evaluator (s) and supervisor. The component C will be fully assessed by the external evaluator (client or agency personal). However, for the assessment component D which involves defense presentation will be assessed by inviting around 3 or 4 relevant panel members to the project. The rationale for not involving the supervisor in assessment component C is to bring fresh insights and perspectives by an external evaluator to improve the project. Moreover, involving

the supervisor is redundant as they are already involved across the capstone project lifecycle. The page limit and word count (including footnotes, excluding title, abstract, bibliography, and appendices) and assessment weighting for each task are given in each section. Table 2 encapsulates the quantity of assessment and its weight for the capstone project.

As for ethics in the project, ethical considerations will be taken seriously across all phases of the capstone project. For example, any sensitive data will be handled with the utmost care, such as

using de-identification or anonymisation techniques, depending on the needs and requirements of the project. The capstone project must be conducted in line with the code of ethics and intellectual property policies of the Royal University of Bhutan. Where necessary, the capstone project will consider the ethical permit and approval requirement. The College Research Committee (CRC) will be responsible for giving the ethical clearance for the project. Moreover, the project coordinator will orient students on project ethics and personal conduct through a week-long seminar (Unit I: Introduction to Capstone Project and Ethics) at the beginning of the semester.

The project coordinator and supervisor are responsible for ensuring that activities are conducted following good project practices. Supervisor consent is necessary if students want to write a conference or journal paper based on the project. Moreover, students are encouraged to explore such avenues to disseminate knowledge.

### a. Project Charter Proposal (15%)

Student(s) will prepare a proposal (approximately 2000 to 3500 words) and submit it to their supervisor. The supervisor will be responsible for supervisory support and assistance while planning, designing, and drafting a project proposal. It is worth noting that the project proposal is permissible for change only before acceptance, and the change request will not be considered afterwards. This is the initial document that formally authorises the existence of the project. It should include the project's purpose, measurable objectives, high-level requirements, identified stakeholders and assigned project manager. The proposal will assess the learning outcomes 1 and 2.

# **Project Charter Proposal Assessment Criteria**

- 3 Marks Project purpose and objectives: Clear project purpose with detailed context and rationale, objectives are measurable and precise.
- 2 Marks Identifying the key performance indicators' are clearly defined with specific, measurable terms, highly relevant and aligned with organization goals, KPIs cover all critical areas, including innovation thinking, and clear reasoning.
- 5 Marks Identification of stakeholder: Stakeholders are clearly defined with specific roles and responsibilities, relevance of stakeholders, comprehensive list of stakeholders with their needs and influence and clear rationale for including stakeholders.
- 3 Marks Document Structure and Clarity: well-organized with logical progression of ideas and clear headings, clear and concise writing, coherent and logical transitions and professionally formatted.
- 2 Marks Grammar, Presentation and word count: free from grammatical errors, professionally presented, meets the word count requirement.

#### b. Project execution and monitoring (20%)

This is a comprehensive plan that outlines how the project will be executed, monitored, and controlled. Students in consultation with the clients and stakeholders will employ appropriate meeting techniques and hold meetings and consultation throughout the project process. The students will produce progress reports in the form of reports, meeting minutes, feedback from the stakeholders, risk logs and issue logs. The reports should demonstrate effective communication and documentation skills. The actual progress of the project will be compared against the planned baseline and the quality and timeliness of the deliverables produced by the project

team. Furthermore, they must demonstrate proficiency in managing problems, promptly addressing and resolving issues as they emerge. The proposal will assess the learning outcomes 3 and 4.

# **Project Execution and Monitoring Assessment Criteria**

- 5 Marks Comprehensive plan and strategies: Clear, well-organized and easy to follow, clearly defined and logically connected to goals, well considered resources, budget, time and risk management, clear and robust plan for measuring success.
- 7 Marks Progress reports: Clear progress reports, minutes recorded, feedback from stakeholders, risk logs and issue logs recorded professionally.
- 5 Marks Progress made against the planned baseline: *Engaged stakeholders well, thorough analysis of actual progress,, and all deliverables are submitted on time.*
- 3 Marks Quality and timeliness of deliverables: deliverables are met with high quality, all deliverables are submitted on time or before deadlines, and proactive in managing timelines.

#### c. Project Assessment by Client/Agency (40%)

This component involves the evaluation by the client of the work conducted by the project team. Clients/agency will assess the quality of the work and the project deliverables or any other output produced by the project team. The proposal will assess the learning outcomes 5.

# **Client/ Agency Assessment Criteria**

10 Marks	Performance Metrics Analysis: adherence to dateline, budget works as per plan, resource used as required and all objectives achieved.
10 Marks	Stakeholder feedback: clearly stated, aligned with objectives and milestones.
5 Marks	Client satisfaction survey: demonstrates outstanding levels of client satisfaction survey in all areas and sets up a survey questionnaire well.
10 Marks	Post implementation review: project objectives fully achieved, considered stakeholders well, included actionable insights and all relevant information added.
5 Marks	Innovation and creativity: Original and unique ideas, effectively addressing complex problems with innovative solutions, positive impact to benefit stakeholders and suitable to implement.

#### d. Final Project Report, Presentation and Participation (25%)

This component represents the culmination of the capstone project, encapsulating its achievements, challenges, lessons learned, and assessing whether project objectives were met. Additionally, students' engagement in the course will be considered including attendance, active participation, responsive to feedback and collaboration with peers. Peer assessment will be conducted to evaluate individual contributions, performance and collaboration within the team. The report must be of 2500 to 3500 words with well formatted. The proposal will assess the learning outcomes 6.

#### **Final Project Assessment Criteria**

10 Marks	Quality of final project report: Comprehensive, accurate and relevant content, addresses all
	aspects, well-organized and logical flow of ideas.
5 Marks	Student engagement in the project: contributes ideas, participates in discussion, takes
	initiatives, and is highly responsive to feedback.
5 Marks	Final project presentation: content presented comprehensively, delivery is engaging, confident, well-rehearsed, clearly articulated, visual aids highly effective, and engaging
	audience.

5 Marks

Professionalism and performance: Demonstrates exceptional commitment, positive attitude, communicates clearly, adaptable to changing situations, support for team building and leadership.

Table 2. An overview of the assessment approaches and weighting

Areas of assessment	Quantity (No.)	Weighting (%)	Assessor	
			Supervisor	Panel
A. Project Charter Proposal	1	15	✓	
B. Project execution and monitoring	1	20	✓	
C. Project Assessment by Client or Agency	1	40		✓
D. Final Project Report, Presentation and Participation	1	25	√	✓

Pre-requisites: CRD302 Deep Domain Mini Project

# Subject Matter:

# **Unit 1: Introduction to Capstone project**

- 1.1 Capstone project
  - 1.1.1 Writing the project proposal
- 1.2 Literature Review
  - 1.2.1 Planning and organizing literature review
- 1.3 Project Selection and Initiation
  - 1.3.1 Understand the Commencement of Project
  - 1.3.2 Identify a suitable capstone project
  - 1.3.3 Define the project scope and develop a project charter.
- 1.4 Ethics in the capstone project

# **Unit 2: Project Planning**

- 2.1 Detailed Project Management Plan
  - 2.1.1 Outline the goal and project scope
  - 2.1.2 State the purposes and significant of project
  - 2.1.3 Develop the detailed project schedule
  - 2.1.4 The costing, quality assurance and resource plan
  - 2.1.5 Develop communication plan and risk analysis
  - 2.1.6 The team formation, procurement and other related project planning documents

# **Unit 3: Project Execution**

- 3.1 The Process of Project Execution
  - 3.1.1 The Project Plan
  - 3.1.2 The resource plan and costing
  - 3.1.3 The Stakeholders Management
  - 3.1.4 The team workers management

# **Unit 4: Project Quality Controlling system**

- 4.1 Project Monitoring and controlling
  - 4.1.1 Monitor project progress and update the project plan
  - 4.1.2 manage changes, and control the project's quality as necessary.

# **Unit 5: Project Closure Procedures**

- 5.1 The Closing of Project
  - 5.1.1 Use of appropriate written formats of project document
  - 5.1.2 The documentation of detailing the project development process
  - 5.1.3 Document with clear instructions if software was used for the project solutions.

# **Essential Reading List:**

Project Management Institute, Inc. (2008). A Guide to Project Management Body of Knowledge. 4th ed. USA. Hauhart, R. C., & Grahe, J. E. (2015). Designing and teaching undergraduate capstone courses. San Francisco: Jossey-Bass.

Ashley, H.J. (2021). CompTIA Project+ Certification Guide

### **Additional Reading List:**

Grix, J. (2004). The foundations of research. New York: Palgrave Macmillan. Strunk, W., & White, E. B. 1. (2000). The elements of style. 4th ed. New York: Longman.

Date: January 2025