འབྲུག་རྒྱལ་ཁྲིམས་གཙུག་ལག་སློབ་དཔེ།།

ཤེས་རབ་རྩེ་མཐོ་རིམ་སློབ་གྲྭ།

ROYAL UNIVERSITY OF BHUTAN

SHERUBTSE COLLEGE

Definitive Programme Document for
Bachelor of Economics and Political Science Programme

Royal University of Bhutan
February 2025

Table Of Contents

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 Economics and Political Science
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 Economics and Political Science aims to provide a general 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 aim of an economics and political science programme is to equip students with a comprehensive understanding of the principles and concepts of both fields. This program seeks to provide students with the necessary knowledge and skills to analyze and evaluate complex economic and political issues, as well as to develop innovative solutions to these problems. Students are expected to develop critical thinking skills and a deep understanding of the interconnections between economics and politics.

An economics and political science programme combines the study of two interconnected fields, providing students with a comprehensive understanding of the economic and political forces that shape our world. Through this programme, students develop a deep understanding of economic theories and principles, as well as the practical applications of these theories in real-world situations. They also gain a broad understanding of political systems, institutions, and processes, enabling them to analyze and evaluate complex economic and political issues. The program aims to cultivate critical thinking skills, effective communication, and a global perspective, preparing students for careers in government, business, international organizations, academia, and beyond. Ultimately, graduates of this program are equipped to become leaders who can make meaningful contributions to society and effect positive change in their communities and the world.

The programme aims to address the human resource need of the country in preparing students for careers in a wide range of fields, including government, business, international organizations, and academia. Graduates of this program should be well-positioned to make meaningful contributions to society, using their skills and knowledge to effect positive change. The program aims to instill a commitment to ethical behavior, social responsibility, and civic engagement in its students, encouraging them to use their skills and knowledge to make a positive impact on the world. The broad focus of the programme are as follows:

- Provide deep understanding of concepts and economic theories and principles, as well as their practical applications in real-world situations.
- Deliver students with various techniques and skills of econometric modelling and research thinking
- Enable students to systematically investigate real-life problems after learning the concepts and theories in economics and political science

- Enable qualitative and quantitative data collection that are relevant to the identified issue and conduct analysis
- Equip students with the usage of various software packages such as python and R to analyse the socioeconomic data
- Develop students with the ability to provide insightful economic interpretations through the use of econometric modelling and analysis.
- Teach students to apply a quantitative analysis of economics to assess the effectiveness of modern laws and policies.
- Introduce fundamental concepts such as power, branches of government, public good, national interests and balance of power in students
- Enable students to evaluate Bhutan's public policy in relation to the best practices elsewhere.
- Instill students with national political awareness context in tandem with regional and international order
- let students analyze geopolitical issues in an increasingly globalized world and enjoy exploring patterns in political and economic events.
- Make students digitally fluent with a global perspective mindset.
- Enable investigative in humanity critical problems using informed data to visualize, predict patterns and create campaigns for real humanity social changes.
- Formulate public policies by using a design-centred approach while being sensitive to the complex political and societal environment
- Make students be able to evaluate policies using quantitative analysis techniques, impact evaluation and cost-benefit analysis
- Help graduates be able to analyze challenges and ethics involved in creating public policies, along with the effects of digitalization and technology on policy processes.
- Enable students to build effective policy communications using data, memos and briefs.
- Equip graduates with the use of big data, analyze strategic interactions, and gain invaluable critical thinking tools.

1.2.2 Learning Outcomes of the Programme

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

1. Analyze and apply economic theories and principles to real-world issues and problems.
2. Model and apply advanced econometric methods to analyze and evaluate policy options.

3. Interpret the determination of microeconomic and macroeconomic indicators, applied issues relating to developing countries and contextualize with the policy impacts and debates.

4. Evaluate different options in projects using different strategies and negotiate the outcomes based on game theoretic modelling.

5. Think critically, find solutions to challenges and communicate effectively to lead economic, social, political and environmental issues.

6. Understand the structure and functions of political systems, including the role of institutions, power, and authority.

7. Evaluate political theories and concepts, and apply them to contemporary political issues.

8. Analyze quantitative and qualitative aspects of data for decision-making and situational analysis.

9. Validate results using appropriate statistical methods and econometric modelling.

10. Communicate findings through documentation, discussion and presentation.

11. Understand and apply ethical principles in the context of economic and political decision-making.

12. 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 21st 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 - Bachelor of Economics and Political Science.

Many nations, including those in the United States, Russia, Australia, India, and other parts of the world, offer Political Science and Economic programmes. Such a programme expands students' knowledge and comprehension of how politics and government work as a whole. Analysis of political systems, as well as its theoretical and practical applications in daily life, are all aided by this. It also serves as a forum for discussion of political problems and analysis of policies.

Specialization in the field would aid in job advancement because politics bind us. Every field, including business, the economy, government, the legal system, civil society, the media, etc., needs political scholars. Students really go on to work as political economists, analysts, and advisors. Similarly, offering Political Science and economics in Bhutan would enable students to have a thorough understanding of both governance and politics. Because Bhutan is a new democracy, teaching such subjects would help pupils understand the laws and policies of the government. Additionally, it would be beneficial to comprehend organizational dynamics, research and assess political behaviour and culture.

Students who study a subject in depth will not only be well-versed in political and economic principles, but will also be able to relate and explain the moral justifications for both historical and

contemporary political events. Students would also become engaged citizens and take a keen interest in both domestic and foreign politics as a result of critical analysis and thorough investigation. Additionally, a graduate with economics and political science subject will find other occupations related to the field, including public administration, social worker, educationists, policymakers, financial analysts, parliamentarians, econometricians, etc.

1.4 Programme Structure

Yr.	Sem	Module 1	Module 2	Module 3	Module 4	Module 5
1	I	BML101 Foundations of Project Management	EPS101 Introduction to Environment and Global Economics	DAT101 Statistical Computing I	LAC101 Dzongkha Sháyoen Drétsóel	CSP101 Foundations of Python Programming
	II	MAC101 Foundations of Digital Communicatio n	DAT102 Foundations of Data Science	LAC102 Dzongkha Tsómrig	LAC103 Academic Research Skills	Elective I
2	I	EPS202 Microeconomic Analysis	EPS203 Macroeconomic Analysis	EPS204 Development and Behavioral Economic Analysis	EPS205 Global Public Policy Making	Elective II
	II	EPS206 International Relations	EPS207 Comparative Public Policies in Advanced Societies	DAT206 Quantitative Methods for Decision-Making	DA7207 Applied Econometrics I	Elective III
3	I	DAT307 Applied Econometrics II	EPS301 Game Theory in Business	CRD301 Advanced Skill for Career Development	CRD302 Deep Domain Mini Project	Elective IV
	II	CRD303 Professional Certificate (Deep Domain Specialization)	CRD304 Deep Experiential: Industry Capstone Project			Elective V

Broad Field and Module Codes

Broad Field	Module Code
Business, Management and Leadership	BML

Economics 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, Academic research skills, Dzongkha Communication modules and an elective module.

After completion of First Year Common modules student will choose one from the three programmes viz Bachelors of Economics and Political Science, Bachelor of Communications and Project Management and Bachelor of Data Science and Data Analytic. The choice will be based on their performance in their first year and their preference.

Year II of the program focuses on deep learning in Economics and Political Science subjects, preparing students for industry capstone projects in their third year. They will be oriented to application and theories in Economics, International Relation and Policy Making. Additionally, students will learn Quantitative methods and Econometric techniques.

In Semester I of Year 3, students will learn more advanced econometrics methods and applied game theoretic applications. These are dedicated to advanced learning focused on application in industry capstone projects. Semester II of Year 3 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 3, 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.

Electives

Student after completing Year I Sem I will select one elective track from the three offered. The elective tracks are Entrepreneurship, Public Communication and UI UX. Once student have selected a track, students will be taking 5 modules, one each semester starting from Year I Sem II. For details on elective tracks, please refer to the elective track document.

Student in all the elective tracks will be from all the three programmes viz Bachelors of Economics and Political Science, Bachelor of Communications and Project Management and Bachelor of Data Science and Data Analytics. So, there will be a mix of students from all the three programmes in the three elective tracks.

1.5 Learning and Teaching Approach

The programme'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 programme 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, debates, quizzes, 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
- Problem-solving based assignments
- Quizzes and Debates
- 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 shortlist 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 tree programmes based on performance and interest.

Programme	Eligibility Criteria	Ability Rating
Bachelor of Economics and Political Science	Class XII pass candidates with a minimum of 50% in Mathematics/Business Mathematics and pass in all other subjects	Mathematics / Business Mathematics – 5 English – 3 Dzongkha – 3 2 other subjects – 1

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 zassessment (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 fulfill 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" (www.rub.edu.bt) and the "Academic Affairs Guidelines" (www.sherubtse.edu.bt). This is enabled through specific responsibilities delegated to dedicated staff and institution 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 Department (HoD)

HoD provides organizational and academic leadership for programmes offered by the department and is accountable to the DAA in the day-to-day operations. HoD 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. The 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. The 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 cognizant 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" (www.rub.edu.bt), 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, DAC is mandated with the responsibility of promoting academic quality and standards specific to the department, besides implementing resolutions of the CAC at the departmental level. DAC 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 Semester Guide (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 referral to counselling/parenting, advising on class attendance records, and reporting specific academic needs of students to MT and PL.

1.10 Academic Staff

The following are the faculty members to run the programme efficiently. They were reshuffled from the various existing programmes in BA in Economics and BA in Political Science and Sociology to teach this new programme. They were selected based on competency and relevancy of their academic background. Most of the faculty members have more than 5 years of teaching experience in university with master degree qualification, and they are all in regular service terms. Most of the faculty members have backgrounds in Economics and Political science, some additional backgrounds are in social sciences and arts and humanities, in which the new programme has some components in it. However, re-skilling and up-skilling of the faculty members will be carried on continuously so that the teaching and learning process is not compromised.

Staff Details					
Sl. No.	**Name**	**Position Level**	**Regular/ Fix term**	**No. of Years in Teaching**	**Qualification**
1	Sonam Dendup	P1	Regular	15	MA (Social Research)
2	Tashi Jamtsho	P1	Regular	15	MA (Political Science)
3	Karma Yoezer	P1	Regular	14	MSc (Economics)
4	Ugyen Lhendup	P1	Regular	10	MA (Economics)
5	Thinley Yoezer	P2	Regular	4	MA (Economics)
6	Tandin Penjor	P2	Regular	5	MA (Political Science)
7	Tshering Dorji	P2	Regular	6	MA (Public Policy)
8	Sangay Phuntsho Waiba	P2	Fix term	1	MA (Economics)

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 easily be 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**

General Expenses

The provisional budget estimated Bachelor in Economics and Political Science is Nu. 13.9 million annually. This will include human resource, online books and journals, cost of software and other current expenses.

Expenditure Heads	Amount/ annum in Millions	Units	Total cost (millions)
Salary/ Perks	1.2	8	13.2
Electronic and Library Books	0.3		0.3
Online Journals	0.1		0.1
Software	0.2		0.2
Running Cost	0.1		0.1
Total			**13.9**

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 resources. Subscription to Udemy and Coursera are among 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. To meet the computing requirements of the Economics and Political Science Programme, the current laboratory will be adequate and sufficient.

Table: Requirement of Computing Resources for Bachelor of Economics and Political Science

Serial	Description	Quantity (No.)
1	Computer Sets* (Min 4GB RAM)	29

2	**Software:** Open-source software programs such R, Python, will be used	

Other Support Facilities

The President is the overall executive head of the college, while the Dean of Student Affairs (DSA) is responsible for looking after any issues related to student services to provide a Gross National Happiness (GNH) inspired education and to promote wholesome education in line with the vision and mission of the College. The office of DSA is tasked with promoting co-curricular and extracurricular activities to enhance students' personality and realize their potential.

The College has a counselling service Centre headed by a professional counsellor to cater to counselling services required by students and staff of the College. The Centre provides services such as one to one counselling, group counselling and career counselling.

Games and Sports are an integral aspect to mental, emotional and physical well-being of any individual and that they teach important lessons about teamwork and tenacity. The College encourages both students and staff to actively participate in various games and sports activities. It hosts various intra-college tournaments as well as participates in regional, national and international tournaments organized by the Bhutan University Sports Federation of Bhutan (BUSFoB). The College has a "Games and Sports Committee" chaired by the Dean of Student Affairs and a full-time Coach on campus.

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 (Happiness and Well-being Centre) with 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.

MODULE DESCRIPTORS

Year 1, Semester I

BML101 Foundations of Project Management

Module Code and Title: BLM101 Foundations of Project Management
Programme: Digital Communication and Project Management
Credit Value: 12
Module Tutor: Sonam Choeki Wangmo

General objective

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 hands-on 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.
4. 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

Type	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	**8**	**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.

The task will be assessed based on the following 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. The case study will be assessed using the following 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 Report Criteria

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.*

Case Study Presentation Criteria

2 marks	Content: *Concise summary of key findings and discussions, 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. The task will be assessed based on the following 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 Assignment**	**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
1.4 Discuss the project management principle
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 the 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 & Sons.
Pinto, J. K., & Pearson. (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 https://www.techtarget.com/searchcio/definition/Agile-project-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, Bachelor of Digital Communications and Project Management, Bachelor of Data Science and Data Analytics
Credit Value: 12
Module Tutors: Mr. 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

Type	Approach	Hours per week	Total credit hours
Contact	Lecture	3	**60**
	Presentation and discussion	1	
Independent study	Self-directed study	1	**60**
	Written assignments	1.5	
	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. Group Assignment (15%)

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 main topic.*
2 marks	Arguments and informed critic: *Demonstrates a deep understanding of various environmental valuation methodologies and their applications. The 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 main topic.*
2 marks	Arguments and informed critic: *Demonstrates a deep understanding of various environmental valuation methodologies and their applications. The arguments are well-supported with evidence and examples. Acknowledges the merits and limitations of different methodologies, offering insightful analysis of how they 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 assessment	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)	c. Case study report	1	10
	d. Presentation of case study report	1	15
	a. Class participation	1	5
C. Semester End Examination			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. http://doi.org/10.1093/reep/rem027

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

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

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. 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.

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

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	Outstanding (6-7.5)	Excellent (4.5-6)	Proficient (3-4.5)	Developing (1.5-3)	Needs Improvement (0-1.5)	Multiplying factor

Academic Writing and Integrity	Demonstrates 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 paraphrasing and referencing, with synthesis of appropriate sources.	Minor structural or grammatical errors. Appropriate paraphrasing and referencing, but lacks synthesis of sources.	Several structural or grammatical errors. Paraphrasing and referencing require improvement, with some inappropriate sources.	Poor academic writing structure, numerous errors, and evidence of plagiarism. Referencing is missing or inappropriate.	0.1
Statistical Analysis and Reasoning	Correctly selects and justifies statistical tests/methods, performs accurate calculations, and makes sound statistical decisions and interpretations.	Test/method choice is explicitly stated, correct, and well-justified. All calculations are accurate, and interpretations are consistently correct and well-articulated.	Test/method choice is correct but justification may be inaccurate for some questions. Minor calculation errors, but interpretation s are mostly accurate.	Test/method choice is implied or lacks justification. Some calculation errors, and interpretations are incomplete or partially incorrect.	Incorrect test/method choice. Significant calculation errors, and interpretations evidence a lack of understanding.	0.5
Formal Statistical Reporting	Provides clear hypothesis statements, notation definitions, and conclusion statements consistent with interpretations and supported by relevant statistics.	Hypothesis statements and notation definitions are consistently correct. Conclusion statements are well-structured and fully supported by relevant statistics.	Hypothesis statements and notation definitions are mostly correct. Conclusion statements are consistent but may have minor structural errors or missing statistics.	Hypothesis statements and notation definitions are inconsistent or incomplete. Conclusion statements are partially inconsistent or lack supporting statistics.	Hypothesis statements are missing or incorrect. Conclusion statements are inconsistent, poorly structured, or lack relevant statistics.	0.2
Presentation	Delivers relevant content with clear formatting, logical workflow, and concise description of results.	Content is relevant and free of redundancy. Figures, tables, and numbers are well-formatted. Workflow is logical, and	Minor instances of irrelevant content or formatting issues. Workflow is mostly logical, and results are	Several instances of irrelevant content or formatting issues. Workflow is inconsistent, and results	Irrelevant content throughout. Figures, tables, and numbers are poorly formatted. Workflow is illogical, and	0.2

		results are clearly described.	well-described but may lack clarity in some areas.	lack clarity or detail.	results are missing or incoherent.	
Total						**10**

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)
Motivation and Background	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/hypothes is is exceptionally well-crafted, demonstrating originality, innovation, and a strong alignment with the project's objectives.	The research question/hypothes is 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 in-depth 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 Methodology	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.

2. 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)**
Introduction 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 questions	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.
Methodology	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.

Descriptive 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.
Statistical 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/explained correctly
Results and Discussions	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 Technique	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

References	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

3. 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:

a. Delivery (20%)
b. Knowledge and Content (20%)
c. Analysis and Evaluation (20%)
d. Coherence and Organization (15%)
e. Quality of Presentation (10%)
f. Teamwork (10%)
g. 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)**
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.
Knowledge 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	Generally demonstrates confidence with the subject matter and materials but may lack some depth in confidence or research. Provides some evidence of	Lacks confidence with the subject matter and materials. Insufficient evidence of research. Struggles to explain key ideas/issues

		evidence of research. Adequately explains key ideas/issues.	research. Limited explanation of key ideas/issues.	
Analysis and Evaluation	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/evidence. Superficial or limited analysis of the statistical concepts used in the project.
Coherence and Organization	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 Presentation	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.
Teamwork	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.

Response to Questions	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

Continuous assessment	Areas of assignments	Quantity	Weighting (%)
A (Theory)	a. In-class activity	2	20
	b. Individual assignment	2	15
B (Practical)	b. Practical test	3	40
	c. Group project	1	25
Total		**100**	

Pre-requisites: Nil

Subject Matter:

Unit I: Introduction to Statistics and Spreadsheet Package

1.1 Definition and Scope of Statistics
1.2 Descriptive Statistics vs. Inferential Statistics
1.3 Types of Data: nominal, ordinal, scalar data, qualitative and quantitative data
1.4 Variables: Discrete vs. Continuous variables.
1.5 Data Organization
  1.5.1 Frequency Distribution: type and construction of frequency distribution tables
  1.5.2 Graphical representation of frequency distribution: Histogram, Frequency Polygon, Cumulative frequency curve or the Ogives
1.6 Sampling Techniques
  1.6.1 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
6.10.2 Chi-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 རྩོང་ཁ་ཤེས་ཡོན་འཕྲི་རྒྱ།

སྤྱོང་ཚན་ཨང་དང་མིང་། LAC101 རྩོང་ཁ་ཤེས་ཡོན་འབྲི་རྩལ།

ལས་རིམ། དཔལ་འབྱོར་དང་སྲིད་དོན་ཚན་རིག།

ཨང་ཅན་རྒྱུན་འཛིལ་དང་ལས་འགུལ་འཛིན་སྐྱོང་།

གནས་སྤྱད་ཚན་རིག་དང་དབྱེ་དཔྱད་གནས་སྤྱད་ཚན་རིག།

སྤྱོང་འཐུས། ༡༦།

སྤྱོང་ཚན་སློབ་སྟོན་པ། རྩོང་ཁའི་ལེགས་ཉཱདཔ།

སྤྱོང་ཚན་འགོ་འཛིན་པ། ཤེས་རབ་རྩེ་མཐོ་རིམ་སློབ་གྲྭ་ཆེན་མོ།

སྤྱིར་བཏང་ལས་དོན།

སྤྱོང་ཚན་འདི་གིས་སློབ་ཕྲུག་གི་རྒྱུད་ལུ་ རྩོང་ཁའི་བརྟག་དཔྱད་རིག་པའི་ཤེས་ཡོན་དང་། རིག་རྩལ་ཚུ་འཐོབ་སྟེ་ དེ་ཚུལ་བཞིན་དུ་ལག་ལེན་འཐབ་ཐོག་ལས་ གཞུང་སྐེད་གྱི་ནང་ལུ་ ལྷོགས་གྲུབ་ཚུ་བཏོན་ཏེ་ ཕྱག་ཕྱིད་ཞུ་ཚུགས་པའི་དམིགས་གཏད་བསྐྱེདཔ་ཨིན།

སློབ་སྤྱོང་གྲུབ་འཐས།

སྤྱོང་ཚན་འདི་མཇུག་བསྡུཔ་དང་སློབ་ཕྲུག་ཚུ་གིས།

1. རྩོང་ཁའི་སྐད་ཡིག་གི་འབྱུང་ཁུངས་དང་སྐད་ཡིག་ལྟབ་དགོ་པའི་དགོས་པ་ཚུ་སྒྲུབ་ཚུགས།
2. ལུང་འབྱེན་དང་རྒྱབ་རྟེན་བཀོད་ཐངས་ཚུ་ལམ་ལུགས་དང་འཁྲིལ་ཏེ་ཚུགས།
3. རྗེས་འཇུག་གི་སྒྲ་བཏོན་ཚུལ། ཚིག་མཚམས། བརྗོད་མཚམས། དོན་མཚམས་བཟོ་སྟེ་ཐེ་ཚུགས།
4. མིང་ཚིག་བརྗོད་པ་དང་ཁྱད་ཚིག་ཚུ་འབྲི་སྒྲུབ་འབད་ཚུགས།
5. ཡི་གུའི་སྦྱོར་བ་ཚུ་མ་འཛོལ་བར་བྱེ་ཚུགས།
6. ཡིག་འགྲུལ་གཏོང་ལེན་དང་དེའི་འཁྱུང་ཁུངས་ཚུ་འབྲི་སྒྲུབ་འབད་ཚུགས།
7. རྩོང་ཁའི་ལྟེ་སྦྱོས་བཙུགས་ནི་དང་མཇུག་གཅོད་གཏན་རྟུབ་ཚུགས།

སློབ་སྦྱོང་དང་སློབ་སྟོན་ཐབས་ལམ།

དབྱེ་གཅོད་	ཐབས་ལམ།	བདུན་ཕྲག་གཅིག་ནང་ཆུ་ཚོད།	སྤྱོང་འཐུས་ཆུ་ཚོད།
དངོས་འཛིལ།	གསལ་བཤད། སྤྱན་འདྲུལ།	༢	༤༠
	སློབ་ཁང་སྤྱོང་ལྷ། གོས་སྐྱར།	༢	
རང་སྤྱོང།	ལས་འགུལ་བྱེ་ནི། ཀི་དེབ་དང་ལྷག་དེབ་ལྷག་ནི།	༤	༤༠
སྤྱོང་ཚན་འདི་ནི་ལུ་ཡོངས་སྤོམ་ཆུ་ཚོད།			༡༤༠

དབྱེ་ཞིབ་ཐབས་ལམ།

འོག་གི་ཚད་གཞི་ཚུ་ ལག་ལེན་འཐབ་སྟེ་ སྒྲུགས་ཆེན་ནི་ཨིན།

ཀ དུས་རྒྱུན་དབྱེ་ཞིབ་དང་པ། རྩོང་ཁའི་སྐད་ཡིག་གི་འབྱུང་རབས་འཛིན་སྒྲུབ། སྡེ་ཚན་གྱི་ལས་འགྱུལ། (๔%)

རྩོང་ཁའི་སྐད་ཡིག་འབྱུང་རབས་ཀྱི་སྐོར་ལས་འཛིན་ནི་དང་ སྒྲུབ་ནི་ཚུ་ཐོགས་ཆགས་ག་ནི་ཡང་མེད་པར་འབད་ཚུགས་དགོས་ཨིན། འདི་གི་དོན་ལུ་དོན་ཚན་གཅིག་ལུ་གཞི་བཞག་སྟེ་ བྱེ་དགོས་ཨིན། སྐད་ཡིག་གི་འབྱུང་ཁུངས་ཀྱི་སྐོར་ལས་ ཆ་ཤས་ ๑๐๐ ལས་ ๗๐๐ གི་བར་ན་འབད་མི་ རྩོམ་བྱེས་ཅིག་བྱེ་དགོ། རྩོམ་བྱེས་ནང་ལུ་སྐད་ཡིག་གི་འབྱུང་ ཁུངས་ཚུ་བཤད་པ་ཅུབ་སྟེ་འོང་དགོ། རྩོམ་འབྱེ་ནང་ལུ་སྐད་ཡིག་ལྷབ་དགོ་པའི་དགོས་པ་ཚུ་འོང་དགོ། དེའི་དོན་ལུ་ དབྱེ་ཞིབ ཚར་གཅིག་འབད་ནི་ཨིན། དབྱེ་ཞིབ་ཐབས་ལམ་འདི་གིས་སྐད་ཡིག གི་སྐོར་ལས་འབྱེ་སྒྲུབ་འབད་ཚུགས། རྩོང་ཁའི་སྐད་ཡིག་གི་འབྱུང་ཁུངས་བཤད་ཚུགས། སྐད་ཡིག་ལྷབ་དགོ་པའི་དགོས་པ་ཚུ་སྒྲུབ་ཚུགས།

ཤེས་ཚད་ཀྱི་སྡེྲགས་སྒྲུབ།	སྒྲུགས་ཀྱི་ཚད་གཞི། (๔%)			
ཤེས་ཚད་སྡེྲགས་སྒྲུབ་ཀྱི་ནང་གསེས།	**སྐད་ཡིག་གི་སྐོར་ལས་བཤད་པ། (๲%)**	**སྐད་ཡིག་གི་ཁུངས་གཏུགས། (๓%)**	**དོན་མཚམས། (๓%)**	**ཚིག་གི་གཅོད་མཚམས། (๓%)**
(མཆོག་སྒྲུར།)	སྐད་ཡིག་གི་སྐོར་ལས་བཤད་པ་རྩེ་ཕུད་ཕྱིན་པ།(๔)	སྐད་ཡིག་དང་འབྲེལ་གནད་ཀྱི་ཡིག་ཆ་ལུ་མཆོག་སྒྲུར་ཁུངས་གཏུགས་ཡོད་པ། (๓)	དོན་མཚམས་མཆོག་སྒྲུར་སྦྱོར་བཅད་དེ་ཡོད་པ། (๓)	ཚིག་གི་གཅོད་མཚམས་མཆོག་སྒྲུར་སྦྱོར་བཅད་དེ་ཡོད་པ།(๓)
(རབ)	སྐད་ཡིག་གི་སྐོར་ལས་བཤད་པ་རབ།(๓.๔)	སྐད་ཡིག་དང་འབྲེལ་གནད་ཀྱི་ཡིག་ཆ་ལུ་ཁུངས་གཏུགས་རབ། (๐.๷)	དོན་མཚམས་རབ་སྦྱོར་བཅད་དེ་ཡོད་པ།(๐.๷)	ཚིག་གི་གཅོད་མཚམས་རབ་སྦྱོར་བཅད་དེ་ཡོད་པ།(๐.๷)
(འབྲིང་)	སྐད་ཡིག་གི་སྐོར་ལས་བཤད་པ་འབྲིང་།(๓)	སྐད་ཡིག་དང་འབྲེལ་གནད་ཀྱི་ཡིག་ཆ་ལུ་ཁུངས་གཏུགས་འབྲིང་།(๐.๔)	དོན་མཚམས་འབྲིང་སྦྱོར་བཅད་དེ་ཡོད་པ།(๐.๔)	ཚིག་གི་གཅོད་མཚམས་འབྲིང་སྦྱོར་བཅད་དེ་ཡོད་པ།(๐.๔)
(ཐ)	སྐད་ཡིག་གི་སྐོར་ལས་བཤད་པ་ཐ་མ།(๐.๔)	སྐད་ཡིག་དང་འབྲེལ་གནད་ཀྱི་ཡིག་ཆ་ལུ་ཁུངས་གཏུགས་ཐ་མ།(๐.๲)	དོན་མཚམས་ཐ་མ་སྦྱོར་བཅད་དེ་ཡོད་པ།(๐.๲)	ཚིག་གི་གཅོད་མཚམས་ཐ་མ་སྦྱོར་བཅད་དེ་ཡོད་པ།(๐.๲)

ཁ དུས་རྒྱུན་དབྱེ་ཞིབ་གཉིས་པ། ལུང་འདེན་དང་རྒྱབ་རྟེན་འབད་ཐངས། ངོ་ཅུང་གི་ལས་འགྱུལ། (๑๐%)

སློབ་རིག་དང་འབྲེལ་བའི་དཔེ་དེབ་འཕྲིན་རྩོམ་ཡས་འགྱལ་གྱི་རིགས་གཅི་ར་བྱེས་ཏེ་འབད་རྩུང་ལྟང་འཇེན་དང་རྒྱབ་རྐེན་འབད་ཐབས་ཚུ་ཤེས་ཐབས་ཀྱི་དོན་ལུ་གཞན་དོན་གང་རུང་ཅིག་ལུ་གཞི་བཅོལ་ཏེ་ རྩོམ་བྱེས་ཅིག་འབྲི་ནི་ཨིན། ཁྱོད་ཀྱིས་ལྟང་ འཇེན་དང་
རྒྱབ་རྐེན་འབད་ཐབས་ཀྱི་སྐོར་ལས་ ཚོག་འབྲུ་ ५०० ལས་ ७००० གི་བར་ན་འབད་མི་ རྩོམ་བྱེས་ཅིག་བྱི་དགོ།
རྩོམ་བྱེས་ནང་ལུ་ཐད་ཀར་དང་ཚོག་སྒྲུབ་ཀྱི་ལུང་འཇེན།ཐད་བརྒྱུད་དང་བརྒྱུད་པའི་ལུང་འཇེན་ཚུ་ཚུདཔ་སྒེའོང་དགོ།ལུང་འཇེན་དང་རྒྱབ་རྐེན་འབད་ཐབས་ཡང་རྒྱལ་སྤྱིའི་རྒྱབ་རྐེན་འབད་ཐབས་ཀྱི་ཐབས་ཤེས་ཚེ་པི་ཚེ་ལམ་ལུགས་དང་འཁྲིལ་དགོ།རྩོམ་བྱེས་ཀྱི་གནད་དོན་དང་འབྲེལ་བའི་ལུང་འཇེན་ཚུ་འོང་དགོ།དེའི་ཁར་ཁེ་བའི་གིས་རྩོམ་རིག་གི་ཅ་ར་འབྱི་རྒྱབ་རྒྱལ་སྤྱིའི་ལམ་ལུགས་ཀྱི་ལུང་འཇེན་དང་རྒྱབ་རྐེན་འབད་ཐབས་དང་འཁྲིལ་
ཏེ་མ་འཛོལ་བར་འབྱི་ཚུགས།ཐད་ཀར་ཀྱི་ལུང་འཇེན་དང་ཆོག་སྒྲུངལུང་འཇེན་གཉིས་ཀྱི་ཁྲད་པར་ཚེ་སྟེ་འཛི་ཚུགས།
རང་གི་ཞིབ་འཚོལ་དང་འབྲེལ་བའི་རྒྱུ་ཁུངས་འཚོལ་ཞིབ་འབད་ཚུགས།
ལུང་འཇེན་དང་རྒྱབ་རྐེན་འབད་དགོ་པའི་དགོས་ཁུངས་འབྱི་སྒྲབ་འབད་ཚུགས།

ཤེས་ཚད་ཀྱི་ལྟོགས་གྲུབ།	སྒྲུགས་ཀྱི་ཚད་གཞི། (१०%)			
ཤེས་ཚད་ལྟོགས་གྲུབ་ཀྱི་ནང་གསེས།	ལུང་འཇེན་འབད་ཐབས། (७%)	རྒྱབ་རྐེན་འབད་ཐབས། (७%)	དོན་ཚན་དང་འབྲེལ་བའི་ལུང་འཇེན། (९%)	གཅོད་མཚམས། (९%)
(མཆོག་གྲུབ།)	ཐད་ཀར་དང་ཆོག་སྒྲུབ་ཀྱི་ལུང་འཇེན།འཐད་བརྒྱུད་དང་བརྒྱུད་པའི་ལུང་འཇེན་ཚུ་འཛོལ་བ་གཏི་ཡང་མེད་པ་སྟེ་བཟོ་ཐུབ། (७)	དེའི་དེབ་ཀྱི་རྒྱབ་རྐེན་འབད་ཐབས་ཚུ་ག་ར་ཡོགཔ་སྟེ་བཟོད་ཀྱུག། (७)	རྩོམ་བྱེས་ཀྱི་དོན་ཚན་དང་འབྲེལ་ལུང་འཇེན་ཡང་ག་ར་ཡོགཔ་སྟེ་བཟོད་ཀྱུག། (९)	མིང་ཆོག་གི་ཆོག་མཚམས། བརྗོད་མཚམས། དོན་མཚམས་ཚུ་ཚུལ་མཐུན་སྟེ་བྱེས་ནུག། (९)
(རབ)	ཐད་ཀར་དང་ཆོག་སྒྲུབ་ཀྱི་ལུང་འཇེན། འཐད་བརྒྱུད་དང་བརྒྱུད་པའི་ལུང་འཇེན་གཅིག་འཛོལ་ཏེ་བྱེས་ནུག། (९)	དེའི་དེབ་ཀྱི་རྒྱབ་རྐེན་འབད་ཐབས་གཅིག་མ་ཡོགཔ་པས། (९)	རྩོམ་བྱེས་ཀྱི་དོན་ཚན་དང་འཁྲིལ་ལུང་འཇེན་གཅིག་དོས་འབ་མེད་པ་སྟེ་བཟོད་ཀྱུག། (३)	མིང་ཆོག་གི་ཆོག་མཚམས། བརྗོད་མཚམས། དོན་མཚམས་ཚུ་འཛོལ་བ་ཚ་ཅི་རེ་འདུག། (३)

(འཕྲིང་)	ཐད་ཀར་དང་ཚོག་སྒྲུར་གྱི་ལུང་འདེན། བརྒྱུད་དང་བརྒྱུད་པའི་ལུང་འདེན་གཉིས་འཛོལ་ཏེ་བྱེས་ནུག། (༣)	དཔེ་དེབ་རྒྱབ་རྟེན་འབད་ཐབས་གཉིས་མ་ཐོག་པས། (༣)	རྩོམ་བྱེས་ཀྱི་དོན་ཚན་དང་འཁྲིལཡ་དུ་ལུང་འདེན་གཉིས་འོས་འབབ་མེད་པ་སྦྱེ་བཀོད་ནུག། (༢)	ཚོག་མཚམས། བརྗོད་མཚམས། དོན་མཚོས་ག་རའི་ནང་ཚུལ་མཐུན་སྦྱེ་མིན་འདུག། (༢)
(ཐ)	ཐད་ཀར་དང་ཚོག་སྒྲུར་གྱི་ལུང་འདེན། བརྒྱུད་དང་བརྒྱུད་པའི་"ལུང་འདེན་གསུམ་འཛོལ་ཏེ་བྱེས་ནུག། (༢)	དཔེ་དེབ་ཀྱི་རྒྱབ་རྟེན་འབད་ཐབས་གསུམ་དེ་ཅིག་མ་ཐོག་པས། (༢)	རྩོམ་བྱེས་ཀྱི་དོན་ཚན་དང་འཁྲིལཡ་དུ་ལུང་འདེན་གསུམ་འོས་འབབ་མེད་པ་སྦྱེ་བཀོད་ནུག། (༡)	ཚོག་མཚམས། བརྗོད་མཚམས། དོན་མཚམས་ཚུ་འཕྲི་ནི་རི་རིག་རྒྱལ་ར་མིན་འདུག། (༡)

ཀ དུས་རྒྱུན་དབྱེ་ཞིབ་གསུམ་པ། རྩོང་ཁའི་དག་གཤིས་དང་འཁྲིལ་བའི་འཛི་ལྷག རློབ་ཁང་འཛི་རྒྱུགས། (༡༠%)

རྩོང་ཁའི་སྐད་ཡིག་ལུ་རང་གཤིས་ཀྱི་རྩོད་སྤྱ་དང་འབྲི་ལུགས་ཐུན་མོང་མ་ཡིན་པ་ཚུ་ཡོད་པ་ལས་རྩོང་ཁའི་དག་གཤིས་དང་འཁྲིལ་ཏེ་ འབྲི་ལྷག་དང་སྦྱང་བརྩེན་འབད་དགོཔ་ཚུ་ཡོད་པ་ཞིན།

དེའི་ཤེས་རྟོགས་ལྷ་ནིའི་དོན་ལུ་དེ་བའི་མཐོ་ཚད་དྲུག་གི་འཐོབ་རིམ་དང་འཁྲིལ་ཏེ་གདམ་འཐུའི་དྲི་བ་ལུན་ཐུང་གི་དྲི་བ་ལུན་རིང་གི་དྲི་བ་ཚུ་གང་འཚམས་བཟོ་སྟེ་སློབ་ཁང་འབྲི་རྒྱུགས་ཕྱི་ཞེལ་ཞི་དང་ཤོག་ཐོག་གང་རུང་ཅིག་ ཐུན་ཚན་༡གི་རིང་སྐྱུགས་༡༠% གི་འབྲི་རྒྱུགས་རྒྱབ་དགོཔ་ཞིན། སློབ་ཁང་འབྲི་རྒྱུགས་ཀྱི་སྐྱུགས་ཀྱི་དབྱེ་ཚད་ཚུ་ དམིགས་བསལ་སྦྱེ་མེད། ཞིན་རུང་ དེ་བ་དང་བསྟུན་ཏེ་སྐྱུགས་བྱིན་མི་ཡས་དེ་ཐབས་ལུན་ཚུ་ལེགས་ཤོམ་སྟེ་དབྱེ་ཞིབ་འབད་དེ་སྐྱུགས་བྱིན་དགོཔ་ཞིན།

དབྱེ་ཞིབ་ཐབས་ལམ་འདི་གིས་རྗེས་འཇུག་གི་སྦྱ་ཧིལ་བུ་བཏོན་དགོཔ་དང་ མ་དགོ་པའི་རིགས་ཚུ་ ཁྱད་པར་སྤྱི་ཐུན་མོང་ཐོག་ལས་ཚུགས། རྗེས་འཇུག་དང་མིང་མཐའ་མེད་རྩང་ཡོད་པ་བཟུམ་སྟེ་ ལྷག་ཐངས་ཀྱི་རྒས་རྩལ་ཚུགས། ཚོག་མཚམས། བརྗོད་མཚམས། དོན་མཚམས་འབྲི་ཐངས་ཚུ་ཤེས་ཚུགས།དུས་གསུམ་ལས་མིང་འདི་མང་ཤོས་ཅིག་བྱ་ཚོག་གི་ཅི་ལས་འགྱུབ་ཨིན་ན་ཏ་གོ་ཚུགས།མིང་རྟུང་།བྱ་ཚོག་ལས་མིང་།ཁྱད་ཚོག་ལས་མིང་ཚུའི་ཁྱད་པར་ཞེ་སྟེ་འབྲི་ཚུགས། ཁྱད་ཚོག་གི་རིགས་ངོས་འཛིན་འབད་དེ་འབྲི་ཚུགས་ནི་ཚུ་ཨིན།

སྐྱུགས་ཀྱི་ཚད་གཞི། (༥༠%)

སློབ་ཁང་འབྲི་རྒྱུགས་ཀྱི་སྐྱུགས་ཀྱི་དབྱེ་ཚད་ དམིགས་བསལ་སྦྱེ་མེད་ ཨིན་རུང་ དེ་བ་དང་བསྟུན་ཏེ་སྐྱུགས་བྱིན་མི་ལས་ དེ་བའི་ལན་ཚུ་ལེགས་ཤོམ་སྟེ་དབྱེ་ཞིབ་འབད་དེ་ སྐྱུགས་བྱིན་ནི།

ང་ དུས་རྒྱུན་དབྱེ་ཞིབ་བཞི་པ། ཕད་རྣམ་དབྱེ་དང་དུས་གསུམ་རྣམ་གཞག་གི་ཐོག་ལུ་སྤེ་ཚན་གྱི་སྤྱན་ཀྱུ། (༡༠%)

བང་སྒོང་ཀྱི་ནང་ལུ་གཅད་དགག་ཆེ་ཤོས་ཅིག་ཕད་རྣམ་དབྱེ་དང་དུས་གསུམ་གྱི་བྱ་ཚིག་འདི་ཨིན།རྩོད་པ་ཕྱང་དུ་ཅིག་ལས་མ་ཐེས་ཅང་བང་སྒོང་ཁ་ཤས་དེ་ཕད་རྣམ་དབྱེ་དང་དུས་གསུམ་གྱི་ཐོག་ལུ་སྒོང་སྤྱོན་ཚད་རེ་ཡོད་ཀྱི་ཨིན།ཁ་ཤས་ཀྱི་ནང་ལུ་ཕད་རྣམ་དབྱེ་དང་དུས་གསུམ་གྱི་ཐོག་ལུ་དོན་ཚན་རེ་ཡོད་ཀྱི་ཨིན།ཁ་ཤས་ཀྱི་ནང་ལུ་སྤྱོན་ཐང་སྤྱན་ཀྱུ་འབད་དགོངས་དགོ།དོན་ལུ་སྤྱོན་ཐང་གི་སྒོང་ཁུག་མང་ཤོས་ཤུང་དང་བསྟུན་ཏེ་ཚན་བཟོ་སྟེ་ཚན་རེའི་དུས་ཡུན་སྐར་མ་༧༥གི་རིང་ལུ་སྤྱན་ཁུ་འབད་བའི་བྱ་ཚིག་ཐོག་ལུ་ཡོད་པ་དང་མཐའ་དཔྱད་ལུ་སྐྱགས་ཅིན་ནི་ཨིན།ཁེའ་འདི་གིས་ཕད་རྣམ་དབྱེ་དང་དུས་གསུམ་གྱི་སྐོར་ལས་ཚུལ་མཐུན་གྱི་བཅའ་སྤྱིག་ཀྱུ་སྟེ། སྤྱན་ཁུ་འབད་ཚུགས།

རྩོམ་བྱེས་གཅི་རང་འབྱི་རྒྱང་བརྡའི་སྤྱོར་བ་དང་འཁྱིལ་ཏེ་མ་འཛོལ་བར་འབྱི་ཚུགས།ཁྱེད་འཛེལ་དང་ཁེད་ཀྱི་བྱ་ཆོག་གི་ཁུད་པར་ཕྱེ་སྟེ་འབྱི་ཚུགས།ཆོས་རྫོང་གཉིས་ལུ་ཕད་རྣམ་དབྱེ་དང་དུས་གསུམ་གྱི་བྱ་ཆོག་དང་འཇུག་ཚུལ་གྱི་ཁུད་པར་ཏ་ཡོ་སྟེ་འབྱི་ཚུགས།རྟགས་ཀྱི་དབྱེ་བ་རོས་འཛིན་དང་མིང་མཐའ་སྐ་དང་ཕྱི་མ་གཉིས་ཀྱི་སྐོར་ལས་ འབྱི་སྤྲག་འབད་ཚུགས།

སྐུགས་ཀྱི་ཚད་གཞི། (༡༠%)									
ཤེས་ཚད་ཀྱི་ལྟོ་གས་སྤྱད།	ཟིན་བྱིས་དང་པ། (༡༠%)					མཐའ་དཔྱད་དབྱེ་ཞིབ། (༡༠%)			
ཤེས་ཚད་ལྟོ་གས་སྤྱད་ཀྱི་ནང་གསེས།	དོན་ཚན་གྱི་ནང་དོན། (༣%)	ཡིག་སྒྱོར་དང་ཡིག་སྐེལ། (༣%)	ཁྱངས་གཏུགས་ཀྱི་ཡིག་ཆ་འཚོལ་ཞིབ། (༢%)	སྤྱན་ཁྱེའི་བཅའ་སྒྲིག། (༢%)		དོན་ཚན་གྱི་ནང་དོན། (༣%)	ཡིག་སྒྱོར་དང་ཡིག་སྐེལ། (༣%)	ཁྱངས་གཏུགས་ཀྱི་ཡིག་ཆ་འཚོལ་ཞིབ། (༢%)	སྤྱན་ཁུ་འབད་ཐངས། (༢%)
(མཚོག་སྤྱར།)	དོན་ཚན་དང་འཁྱིལ་ཏེ་ནང་དོན་གཏེ་ཅ་ཟབ་དྲག་རྩེ་ཤུད་ཕྱི་མེད་པ་སྟེ་འདུག། (༣)	བརྡ་སྒྱོད་པའི་གཞུང་དང་འཁྱིལ་ཏེ་འཛོལ་བ་མེད་སྒེ་ཐིས་ཡོད་པ། (༣)	ཁྱངས་གཏུཊ་ཀྱི་ཡིག་ཆ་བཞེ་འཚོལ་ཞིབ་འབད་དེ་ཐིས་ནུག། (༢)	འཕར་གཟུའ་སྟོན་འཕྲུལ་ཨོག་ཅིག་ཏུ་ཐིས། བྱང་ཤིད་ས་སྐྱེག་སོད་ལ་གལ་ཆེན་ལུ། (༢)		དོན་ཚན་དང་འཁྱིལ་ཏེ་ནང་དོན་གཏེ་ཅ་ཟབ་དྲག་རྩེ་ཤུད་ཕྱི་མེད་པ་སྟེ་འདུག། (༣)	བརྡ་སྒྱོད་པའི་གཞུང་དང་འཁྱིལ་ཏེ་འཛོལ་བ་མེད་སྒེ་ཐིས། (༣)	ཁྱངས་གཏུཊ་ཀྱི་ཡིག་ཆ་བཞེ་འཚོལ་ཞིབ་འབད་དེ་ཐིས་ནུག། (༢)	འཕར་གཟུའ་སྟོན་འཕྲུལ་ཨོག་ཅིག་ཏུ་ཐིས། བྱང་ཤིད་ས་སྐྱེག་སོད་ལ་གལ་ཆེན་ལུ། (༢)

(རབ)	དོན་ཚན་དང་འཁྱིལ་ཏེ་ནང་དོན་ཀྱི་གཏིང་ཟབ་འདི་རབ་སྟེ་བཀོད་ནུག། (༢)	ཡིག་སྒྱོར་དང་ཡིག་སྟེབ་ཚུ་གཅེས་དེ་ཅིག་འཛོལ་ཏེ་བྱིས་ནུག། (༢)	ཁྲངས་གཏུགས་ཀྱི་ཡིག་ཆ་གསུམ་འཚོལ་ཞིབ་འབད་དེ་བྱིས་ནུག། (༡.༤)	འཕར་གཟུགས་སྟོན་འཕྲུལ་/ཤོག་ཆུང་། ཟིན་བྱིས། ཚུ་མཉོ་ཆས་ལག་ལེན་ལྟ། (༡.༤)			དོན་ཚན་དང་འཁྱིལ་ཏེ་ནང་དོན་ཀྱི་གཏིང་ཟབ་འདི་རབ་སྟེ་བཀོད་ནུག། (༢)	ཡིག་སྒྱོར་དང་ཡིག་སྟེབ་ཚུ་གཅེས་དེ་ཅིག་འཛོལ་ཏེ་བྱིས་ནུག།(༢)	ཁྲངས་གཏུགས་ཀྱི་ཡིག་ཆ་གསུམ་འཚོལ་ཞིབ་འབད་དེ་བྱིས་ནུག།(༡.༤)	འཕར་གཟུགས་སྟོན་འཕྲུལ་/ཤོག་ཆུང་། ཟིན་བྱིས། ཚུ་མཉོ་ཆས་ལག་ལེན་ལྟ།(༡.༤)
(འཁྱིལ།)	དོན་ཚན་དང་འཁྱིལ་ཏེ་ནང་དོན་ཀྱི་གཏིང་ཟབ་འདི་འབྱེང་ཚན་མིན་འདུག། (༡)	ཡིག་སྒྱོར་དང་ཡིག་སྟེབ་ཚུ་བཞེ་དེ་ཅིག་འཛོལ་ཏེ་བྱིས་ནུག། (༡)	ཁྲངས་གཏུགས་ཀྱི་ཡིག་ཆ་གཅིས་འཚོལ་ཞིབ་འབད་དེ་བྱིས་ནུག། (༡)	འཕར་གཟུགས་སྟོན་འཕྲུལ་ཆུ་ངམ་གཅིག་མ་ཁོ་ཆས་ལག་ལེན་འཐབ་མི་ལྟུ། (༡)			དོན་ཚན་དང་འཁྱིལ་ཏེ་ནང་དོན་ཀྱི་གཏིང་ཟབ་འདི་འབྱེང་ཚན་མིན་འདུག། (༡)	ཡིག་སྒྱོར་དང་ཡིག་སྟེབ་ཚུ་བཞེ་དེ་ཅིག་འཛོལ་ཏེ་བྱིས་ནུག། (༡)	ཁྲངས་གཏུགས་ཀྱི་ཡིག་ཆ་གཅིས་འཚོལ་ཞིབ་འབད་དེ་བྱིས་ནུག། (༡)	འཕར་གཟུགས་སྟོན་འཕྲུལ་ཆུ་ངམ་གཅིག་མ་ཁོ་ཆས་ལག་ལེན་འཐབ་མི་ལྟུ། (༡)
(ཁ)	དོན་ཚན་དང་འཁྱིལ་ཁ་དོན་ཀྱི་ཡིག་ཆ་ཚུ་ཅིག་ཤོས་ཡོད་མིན་འདུག། (༠.༤)	ཡིག་སྒྱོར་དང་ཡིག་སྟེབ་ཚུ་དྲག་དེ་ཅིག་འཛོལ་ཏེ་བྱིས་ནུག། (༠.༤)	ཁྲངས་གཏུགས་ཀྱི་ཡིག་ཆ་ཅིག་དེ་ཅིག་འཛོལ་ཞིབ་འབད་དེ་བྱིས་ནུག། (༠.༤)	སྒྱུན་ཞུའི་མཉོ་ཆས་ག་ནི་ཡང་མེད་པར་ཁ་སྐམ་གྱི་ཐོག་ལས་སྒྱུན་ཞུ་འབད་མི་ལྟུ། (༠.༤)			དོན་ཚན་དང་འཁྱིལ་ཁ་དོན་དོན་ཀྱི་ཐ་མ་ཅིག་ལས་མིན་འདུག། (༠.༤)	ཡིག་སྒྱོར་དང་ཡིག་སྟེབ་ཚུ་དྲག་དེ་ཅིག་འཛོལ་ཏེ་བྱིས་ནུག།(༠.༤)	ཁྲངས་གཏུགས་ཀྱི་ཡིག་ཆ་ཅིག་དེ་ཅིག་འཚོལ་ཞིབ་འབད་དེ་བྱིས་ནུག།(༠.༤)	སྒྱུན་ཞུའི་མཉོ་ཆས་ག་ནི་ཡང་མེད་པར་ཁ་སྐམ་གྱི་ཐོག་ལས་སྒྱུན་ཞུ་འབད་མི་ལྟུ།(༠.༤)

ཅ དུས་རྒྱུན་དཔྱེ་ཞིབ་ལྟ་བ། དཔོལ་དང་སྡུར་སྟོལ་གྱི་ཞུ་ཡིག་འབྲི་ཐངས། ཁཤེར་ཡིག་དང་གན་རྒྱ་འབྲི་ཐངས། མཐོན་བརྟ་དང་ཐོས་ཚོད་འབྲི་ཐངས་ཀྱི་སྐོར། ངོ་རྒྱུད་གི་ལས་འགྱུལ། (༢༠%)

གཞུང་སྐེར་གྱི་ཡིག་འགྱུལ་ཚུ་གི་ཅ་ར་འབྲི་རྒྱུ་སྐྱེག་བཏོད་དང་ཁྲད་ཆོས་ཚང་བའི་ཐོག་ལས་ཚུལ་མཐུན་སྦེ་འབྲི་ཤེས་ནིའི་དོན་ལུ་བརྩོད་དོན་གང་རུང་ཅིག་ལུ་ཁག་ཐེག་རྐེན་འབད་དེ་

དཔེ་སྡེར་སྡེལ་གྱི་ཞུ་ཡིག་འབྲི་ཐངས།བཤེར་ཡིག་དང་གན་རུ་འབྲི་ཐངས།མཚོན་བརྡ་དང་གོས་ཚོད་འབྲི་ཐངས་ཀྱི་དཔེ་རེ་བཀོད་དེ་ལས་འགྱལ་བྱེ་ནི་ཞིན།དབྱེ་ཞིབ་འདི་གིས་ཡི་གུ་གཏེར་ལེན་གྱི་སྐབས་ད་སྡེལ་དང་སྡར་སྡེལ་གཉིས་ཀྱི་ཁད་པར་ཚུ་ཤ་གོ་སྟེ་འབྲི་ཚུགས།ད་སྡེལ་དང་སྡར་སྡེལ་གཉིས་ཀྱི་སྒྲིག་བཀོད་དང་གུས་ཞབས་ཀྱི་འཛོབ་རིམ་དང་འཁྲིལ་ཏེ་འབྲི་ཚུགས།ཁྲིམས་འཛེལ་གྱི་བཤེར་ཡིག་དང་གན་རུ་ཚུ་ཁྲིམས་གཞུང་གི་འཛོབ་རིམ་དང་འཁྲིལ་འབྲི་ཚུགས། མཐོན་ཞུ་དང་གོས་ཚོད་ཀྱི་འབྲི་ལུགས་དང་འཁྲིལ་ ཚུལ་མཐུན་སྒེ་འབྲི་ཚུགས།

ཤེས་ཚད་ཀྱི་ཡོ་ཐག་སྒྲུབ།	སྐུགས་ཀྱི་ཚད་གཞི། (༡༠%)			
ཤེས་ཚད་ལྟོ་གས་སྒྲུབ་ཀྱི་ནང་གསེས།	སྒྲིག་བཀོད། (༣༠%)	གུས་ཞབས་འཛོབ་རིམ། (༩%)	མིང་ཚིག་ཐ་སྙད་དང་སྐད་ཡིག་ཡག་ལེན། (༩%)	འབྲི་བཀོད།(༡%)
(མཚོག་སྒྲུབ།)	ཡིག་འགྲུལ་གྱི་འཛོབ་ལམ་དང་འཁྲིལ་ སྒྲིག་བཀོད་ཀྱི་ཁྲད་ཚོས་ཚུ་མ་འཛོལ་བར་བྱིས་ནུག། (༣༠)	ཡིག་འགྲུལ་གྱི་ཡུལ་དང་འཁྲིལ་ཏེ་ གུས་ཞབས་ཀྱི་འཛོབ་རིམ་ཚུ་ མ་འཛོལ་བར་བྱིས་ནུག། (༩)	དོན་ཚན་དང་འཁྲིལ་བའི་མིང་ཚིག་དང་སྐད་ཡིག་གི་ཚིག་གཞི་བཙུགས་ཐངས་ཚུ་ མཚོག་ཏུ་སྐུང་པ་སྟེ་བྱིས་ནུག། (༩)	ཤོག་གུའི་ཞེང་ཁམས། ཤོག་གུའི་གཡས་གཡོན་ གྱི་འབྱི་མཚམས། ཚིག་མཚམས། བརྗེད་མཚམས། དོན་མཚམས་ཚུ་ འབྲི་བཀོད་ཀྱི་ཁྲད་ཚོས་ ལྷ་དང་ལྡན་སྟེ་བྱིས་ནུག (༢)
(རབ)	སྒྲིག་བཀོད་ཀྱི་ཁྲད་ཚོས་གཅིག་འཛོལ་ཏེ་བྱིས་ནུག། (༧)	གུས་ཞབས་ཀྱི་འཛོབ་རིམ་ གཅིག་ འཛོལ་ཏེ་བྱིས་ནུག། (༣)	དོན་ཚན་དང་འཁྲིལ་བའི་མིང་ཚིག་དང་སྐད་ཡིག་གི་ཚིག་གཞི་བཙུབ་ཐངས་ཚུ་རབ། (༣)	འབྲི་བཀོད་ཀྱི་ཁྲད་ཚོས་ ལྷ་ནང་ལས་ གཅིག་ཚུལ་དང་མཐུན་ སྟེ་མ་བྱིས་བས། (༡.༤)
(འགྲིང་)	སྒྲིག་བཀོད་ཀྱི་ཁྲད་ཚོས་གཅིག་ཉེས་དེ་ཅིག་འཛོལ་ཏེ་བྱིས་ནུག། (༤)	གུས་ཞབས་ཀྱི་འཛོབ་རིམ་ གཅིག་དེ་ཅིག་འཛོལ་ཏེ་བྱིས་ནུག། (༢)	དོན་ཚན་དང་འཁྲིལ་བའི་མིང་ཚིག་དང་སྐད་ཡིག་ཚིག་གཞི་བཙུགས་ཐངས་ཚུ་འབྱིང་ཙམ། (༢)	འབྲི་བཀོད་ཀྱི་ཁྲད་ཚོས་ ལྷ་ནང་ལས་ གཅིག་དེ་ཅིག་ཚུལ་མཐུན་ལེདཔ་སྟེ་བྱིས་ནུག། (༡)

(ཐ)	སྒྲིག་བཀོད་ཀྱི་ཞུན་ཆོས་གསུམ་དེ་ཅིག་འཛོལ་ཏེ་བྱེས་ནུག། (༣)	གུས་ཞབས་ཀྱི་འཐོབ་རིམ་གསུམ་དེ་ཅིག་འཛོལ་ཏེ་བྱེས་ནུག། (༧)	དོན་ཚན་དང་འཁེལ་བའི་མིང་ཚིག་དང་སྐད་ཡིག་གི་ཚིག་གཞི་བཏུབ་ཐད་ས་ཁ། (༧)	འབྲི་བཀོད་ཀྱི་ཞུན་ཆོས་ལྟ་ནང་ལས་བཞི་དེ་ཅིག་འབྲི་ལུང་དང་མ་མཐུན་སྒྲིས་ནུག། (๐.๫)

ཆ དུས་རྒྱུན་དཔེ་ཞིབ་དྲུག་པ། རྫོང་ཁའི་མཚན་གཞོན་ཀུབ་ཐངས། ངོ་རྒྱང་གི་ལས་འགྱུལ། (๗๫%)

རྫོང་ཁའི་ཡི་གུ་གा་ཅི་འབྲི་རྒྱང་ ཐོགས་ཆགས་མེད་པར་ མཚན་གཞོན་རྒྱབ་སྟེ་ བྱེ་ཤེས་དགོས་ཞིན། དེ་འབདཔ་ལས་ རྫོང་ཁ་གོང་འཕེལ་ལྟན་ཚོགས་ཀྱི་ཡོངས་འབྲེལ་འཆར་སྒོ་ https://www.dzongkha.gov.bt/dz/tools ནང་ལུ་ “རྫོང་ཁ་མཚན་གཞོན་སློབ་སྟོན་རིམ་ལུགས་” ཟེར་མི་དང་འཁེལ་སྤྱང་བ་འབདཝ་དེ་ མཚན་གཞོན་སྤྱན་འབྲལ་ཕྱལ་དགོ། གྲོགས་རྟོག་ལས་འཐོབ་ཡོད་པའི་བརྒྱ་ཆ་དང་འཁེལ་ཏེ་ བརྒྱ་ཆ་ ๗๫% གུང་ཕབ་སྟེ་ སྐུགས་ཐྲིན་ནི་ཞིན། དབྱེ་ཞིབ་འདི་གིས་གྲོག་རིག་ནང་ རྫོང་ཁའི་ཡིག་གཟུགས་བཏུགས་ཏེ་ འབྲི་ཚུགས། འགྱལ་འཕེན་ནང་ རྫོང་ཁའི་ཡིག་གཟུགས་བཏུགས་ཏེ་ འབྲི་ཚུགས། གྲོག་རིག་དང་འགྱལ་འཕེན་ནང་ལུ་ རྫོང་ཁའི་ལྷེ་སྦྱོམ་བཏུད་ཐངས་ཤེས་ཚུ་ག། རྫོང་ཁ་ཡི་གུའི་གྱལ་གཅོད་མཚམས་རིམ་སྒྲིག་འབད་དེ་ འབྲི་ཚུགས། ཚོད་ཀྱིས་རྫོང་ཁའི་མཐུན་གཞོན་ཡང་ སྦྱོབ་ཁང་དང་ ཡང་ན་ གྲོག་རིག་ཁང་མིག་ནང་ལུ་སྟེ་ ཐུན་ཚན་ ๑ གི་རིང་ལུ་ རྫོང་ཁའི་མཐུན་གཞོན་ཀུབ་ཐངས་སྤྱན་འབྲལ་ཕྱལ་དགོ།

ཤེས་ཚད་ཀྱི་སྡེགཔ་གྱུབ།	སྐུགས་ཀྱི་ཚད་གཞི། (๗๫%)		
ཤེས་ཚད་སྡེགཔ་གྱུབ་ཀྱི་ནང་གསེས།	གྲོག་རིག་ནང་ རྫོང་ཁའི་ཡིག་གཟུགས་བཏུགས་ཏེ་ འབྲི་ཚུགས། (๔)	གྲོག་རིག་དང་འགྱལ་འཕེན་ནང་ལུ་ རྫོང་ཁའི་ལྷེ་སྦྱོམ་བཏུད་ཐངས་ཤེས་ཚུ་ག། (๕)	རྫོང་ཁ་ཡི་གུའི་གྱལ་གཅོད་མཚམས་ རིམ་སྒྲིག་འབད་དེ་ འབྲི་ཚུགས། (๙)
(མཆོག་གྱུར)	གྲོག་རིག་ནང་ རྫོང་ཁའི་ཡིག་གཟུགས་བཏུགས་ཏེ་ འབྲི་ཚུགས་མི། (๔)	གྲོག་རིག་དང་འགྱལ་འཕེན་ནང་ལུ་ རྫོང་ཁའི་ལྷེ་སྦྱོམ་བཏུད་ཐངས་ཤེས་མི།(๕)	རྫོང་ཁ་ཡི་གུའི་གྱལ་གཅོད་མཚམས་ རིམ་སྒྲིག་འབད་དེ་ འབྲི་ཚུགས་མི།(๙)
(རབ)	གྲོག་རིག་ནང་ རྫོང་ཁའི་ཡིག་གཟུགས་བཏུགས་ཏེ་ ཏ་ལམ་འབྲི་ཚུགས་མི།(๙)	གྲོག་རིག་དང་འགྱལ་འཕེན་ནང་ལུ་ རྫོང་ཁའི་ལྷེ་སྦྱོམ་ནང་ཏ་ལམ་བཏུད་ཤེས་མི། (๓)	རྫོང་ཁ་ཡི་གུའི་གྱལ་གཅོད་མཚམས་ རིམ་སྒྲིག་འབད་དེ་ ཏ་ལམ་ འབྲི་ཚུགས་མི།(๓)

(འབྲིང་)	གློག་རིག་ནང་ རྩོད་ཞིའི་གན་ཁུངས་བཙུགས་ ཏེ་ ཚ་ཚེ་འབྲི་ཚུགས་མི།(૩)	གློག་རིག་དང་འགྲུལ་འཕྲིན་ནང་ལུ་ རྩོད་ཞིའི་ལྟེ་སྦྲེམ་ནང་ཚ་ཚེ་བཙུད་ཤེས་མི། (૩)	རྩོད་ཞི་ཡི་གྱའི་ཐུལ་གཅོད་མཚམས་ རིམ་སྤྱིག་འབད་དེ་ ཚ་ཚེ་འབྲི་ཚུགས་མི།(૩)
(ཧ)	གློག་རིག་ནང་ རྩོད་ཞིའི་ཡིག་གཟུགས་བཙུགས་ ཏེ་ འབྲི་མ་ཚུགས་མི།(૩)	གློག་རིག་དང་འགྲུལ་འཕྲིན་ནང་ལུ་ རྩོད་ཞིའི་ལྟེ་སྦྲེམ་ནང་བཙུད་མ་ཤེས་མི།(૭)	རྩོད་ཞི་ཡི་གྱའི་ཐུལ་གཅོད་མཚམས་ རིམ་སྤྱིག་འབད་དེ་ འབྲི་མ་ཚུགས་མི།(૭)

དབྱེ་ཞིབ་ཐབས་ལམ་དང་ལྷིད་ཚད་ཀྱི་བཀོད་རིས།

དུས་རྒྱུན་དབྱེ་ཞིབ།	དབྱེ་ཞིབ་ཀྱི་དབྱེ་བ།	གྲངས་ཁ།	སྐུགས་ཀྱི་བརྒྱ་ཆ།
ཀ (གསལ་བཤད་)	ཀ སྤྲོད་ཁང་ཆོས་རྒྱུགས།	૧	૩૦
	ཁ སྤྱན་འདྲུལ།	૩	૩૦
	ག མཇུག་གཅོན།	૧	૧૫
ཁ (སྤྲོང་ལྟ)	ང་ ལས་འགྱལ།	૩	૯૫
ཡོངས་སྡོམ།		**૧૦૦**	

སྤྲོང་ཚན་སྡེན་ཚང་། མེད།

སྤྲོང་ཚན་གྱི་ནང་དོན།

ལས་ཚན་དང་པ། སྐད་ཡིག་གི་འབྲུང་རབས།

૧.૧ སྐད་ཡིག་གི་གོ་དོན།

૧.૩ སྐད་ཡིག་དང་ཁ་སྐད་ཀྱི་ཁྱད་པར།།

૧.૩ འབྲུག་རྒྱལ་ཁབ་ནང་ཁ་སྐད་ཀྱི་རིགས་དང་ གཞུང་སྐད་འདི་ རྩོད་པ་བཞག་དགོ་པའི་ཁུངས།

૧.૯ རྩོད་ཞིའི་སྐད་ཡིག་གི་འབྲུང་རབས་རགས་བསྡུས།

૧.૫ རྩོད་ཞ་འདི་ཡིག་ཐོག་ལུ་འབྲི་སྟོལ།

૧.૬ སྐད་ཡིག་ལྷབ་དགོ་པའི་སྐོར།

૧.૭ སྐད་ཡིག་གི་ཚན་གཅོད།

ལས་ཚན་ གཉིས་པ། ལུང་འདེན་དང་རྒྱབ་རྟེན་འབད་ཐངས།

૩.૧ ལུང་འདེན།

૩.૧.૧ ཐད་ཀར་གྱི་ལུང་འདེན་ཐངས།

རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (༢༠༡༣) *རྫོང་ཁའི་བརྡ་གཞུང་སྒྲིག་བའི་སྐོབ་ཚེ།* འབྲུག། ཐིམ་ཕུ། སྤྱན་གཉིས་མཐུན་འབེལ་པར་སྐྲུན་དང་དུས་སྐྲུན་ཁང་།

རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས་ཀྱི་ཡོངས་འབེལ་འཛུར་སྒོ་ནང་ཡོད་མི་ རྫོང་ཁ་མཇུག་གཙོན་སྒོག་སྐོང་རིམ་ལུགས།(ཕིན་ཏོས)དང་ རྫོང་ཁ་མཇུག་གཙོན་སྒོག་སྐོང་རིམ་ལུགས།(ཨེ་པུལ)གཉིས་ཀྱི་འབེལ་མཐུད།

https://www.dzongkha.gov.bt/uploads/files/downloads/Dzongkha_ typing_ tutor_ setup_1.0.0_c7399525fb25292adef98df4b71d3329.exe

རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (༢༠༢༢) *རྫོང་ཁའི་ལུང་འདེན་དང་རྒྱབ་རྟེན་བཀོད་ཐངས་དུས་དེབ།* འབྲུག། ཐིམ་ཕུ། རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས།

ཁ་སྐོང་ལྷག་དགོ་པའི་དུས་ཐོ།

ཐུབ་བསྟན་བཅོན་འགྲུས། (༡৮৮༣) *སུམ་རྩགས་འགྲེལ་པ་ཚེར་བྱའི་མེ་ལོང་།* མི་སོར། སེར་སྨད་འཕྲུལ་སྤར་ཁང་།

པབ་རྒྱལ་མཚན་དང་བསོད་ནམས་ཚེ་དབང་། (༢༠༡༣) *ཏུས་གསུམ་ཕྱོགས་བསྒྲིགས་ཀུན་གསལ་མེ་ལོང་།* Dhi Publication

པབ་རྒྱལ་མཚན། (༢༠༡༡) *བརྡ་སྦྱོད་པའི་གྲུབ་མཐའི་གླེང་བརྗོད་ཆེན་མོ་འཛམ་གླིང་རྒྱན་གཅིག།* ཕྱེ་ལི། ཆོས་སྦྱོད་དང་སྐྱེན་ཁང་།

རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (১৮৮৫) *རྫོང་ཁའི་ཡིག་སྐུར་ཆམ་གཞག་བྱོ་གསར་དཔྱེས་པའི་མགུལ་རྒྱན་པབ་ལྟེང་བ།* འབྲུག། ཐིམ་ཕུ། གེ་ཨེམ་ཀྱི།

རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (২০০২) *རྫོང་ཁའི་བརྡ་གཞུང་གསར་པ།* འབྲུག། ཐིམ་ཕུ། རྫོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། རྫོང་ཁ་ཡུ་ནི་ཀོ་ད་རིམ་ལུགས་བཙུགས་ཐངས་དང་རིམ་སྒྲིག་ལམ་སྟོན།

https://www.dzongkha.gov.bt/uploads/files/publications/A_guide_to_installation_and_configuration_of_Unicode_Tools_for_Dzongkha_689180bbfee5de068edab6ea1a6449d1.pdf

སི་ཏུ་ཆོས་ཀྱི་འབྲུང་གནས། (২০০৫) *མཁས་པའི་འགྲུལ་རྒྱན་སུ་ཏྲི་ག་ཟེད་མཛེས།* ཕྱེ་ལི། བོད་གཞུང་ཤེས་རིག་དཔར་ཁང་།

སྤྱི་ཚེས: སྤྱི་ཟླ་༡ ༢༠༢༥།

CSP101 Foundations of Python Programming

Module Code and Title:	CSP101 Foundations of Python Programming
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):	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:

1. 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
Contact	Lecture, Guided Discussions, Presentation	2	30
	Practical	2	30
Independent study	Assignments, Lab Exercises & Projects	2	30
	Self-study	2	30
Total			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:

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 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 Implementation & Functionality (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 & Manipulation (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.
Visualization & Presentation (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 Readability & Documentation (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

Sl.No.	Areas of assessment	Quantity	Weighting (%)
A	Online Quiz	2	20
B	Assignment	1	25
C	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.

Year February 2025

Year 1, Semester II

MAC101 Foundation of Digital Communication

Module Code and Title: MAC101 Foundation of Digital Communication
Programme: Common module
Credit: 12
Module Tutor(s): Anju Chhetri and Sangay Lhaden
Module Coordinator: 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 AI content creators for quick content creation.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Facilitation and discussion	1	**60**
	In-class exercises	0.5	
	Lab tutorial	1.5	
	Lab Practice	1	
Independent study	Field work	1.5	**60**
	Script writing	1.5	

	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	Areas of assessment	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

Type	Approach	Hours per week	Total credit hours
Contact	Lecture, Guided Discussions, Presentation	2	30

	Practical	3	45
Independent study	Assignments, Lab Exercises & Projects	1	15
	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 be 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

Sl.No.	Areas of assessment	Quantity	Weighting (%)
A	Online Quizzes	4	20
B	Group Assignment	1	35
C	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.

LAC102 རྩོང་ཁ་རྩོམ་རིག།

སྤྱོང་ཚན་ཨང་དང་སྤྱོང་ཚན་མིང་། LAC102 རྩོང་ཁ་རྩོམ་རིག།

ལས་རིམ། དཔལ་འབྱོར་དང་སྲིད་དོན་ཚན་རིག། ཨང་ཅན་རླུན་འཕེལ་དང་ལས་འགུལ་འཛིན་སྒྲིང་། གནས་སྤུད་ཚན་རིག་དང་དབྱེ་དཔྱད་གནས་སྤུད་ཚན་རིག།

སྤྱོང་འཐུས། ༡༢ །

སྤྱོང་ཚན་སློབ་སྟོན་པ། རྩོང་ཁའི་ལེགས་བཤད།

སྤྱོང་ཚན་འགོ་འདྲེན་པ། ཤེས་རབ་རྩེ་མཐོ་རིམ་སློབ་གྲྭ་ཆེན་མོ།

སྤྱིར་བཏང་ལས་དོན།

སྤྱོང་ཚན་འདིའི་དམིགས་གཏད་འདི་ སློབ་ཕྲུག་ཚུ་གིས་ གཞུང་སྐེར་གྱི་ལྟ་གཡོག་གི་ཅ་ནང་འབད་རུང་ རྩོང་ཁའི་རྩོམ་རིགཔ་གི་ལྟ་ཚུ་ ཤེས་ཡོན་འབྲི་རྩལ་དང་ལྡན་མ་སྤྲ་ བྱི་ཚུགས་ནིའི་དོན་ལུ་ཨིན། དེ་མ་ཚད་ སྤྱོང་ཚན་འདི་ལུ་བརྟེན་ རྩོང་ཁའི་རྩོམ་བྱིས་པ་ཅིག་འབད་སྟོད་ཚུགས་ནིའི་དམིགས་པ་བསྐྱེད་ཨིན།

སློབ་སྤྱོང་གྲུབ་འཐས།

སྤྱོང་ཚན་འདི་མཇུག་བསྡུམ་ད་ སློབ་ཕྲུག་ཚུ་གིས།

༡ སྤྱིར་བཏང་རྩོམ་རིག་གི་དགོས་ཁུངས་ཚུ་སྤྲབ་ཚུགས།

༢ སྡུང་རིགས་ཉན་ནི། ལྷག་ནི། སྤྲབ་ནི་དང་སྡུང་གསར་རྩོམ་འབད་དེ་བྱི་ཚུགས།

༣ སྡུང་། གཏམ་བརྒྱུད། ལོ་རྒྱུས་ཚུ་ལུ་གཞི་བཅོལ་ཏེ་ འཁྲབ་སྡུང་རེ་གསར་གཏོད་འབད་དེ་བྱི་ཚུགས།

- ཁ་བཤད་དེང་དང་འཚེལ་བའི་དུས་ཐུང་སྒོག་བརྟན་བཙོ་སྐྱན་འབད་དེ་སྟོན་ཚུགས།
- ཁ་བཤད་རྩོད་མོ་བློ་ཟེ་ཚུ་འཐེན་སྐྱར་དང་ དཔེ་དོན་སྤྱར་ཏེ་གསར་རྩོམ་འབད་དེ་བྱེ་ཚུགས།
- འབྲི་རྩོམ་གྱི་ཁྲད་ཆོས་ཚང་བའི་ཐོག་ལས་ ལུང་རིགས་ཚུ་དྲངས་ཏེ་འབྲི་རྩོམ་བྱེ་ཚུགས།
- ཆོག་བཤད་ཀྱི་ཐབས་རིག་ཚུ་ཐོབ་སྟེ་ མི་མང་གི་སྤྱག་ལུ་ གསལ་བཤད་གཏང་ཚུགས།

སློབ་སྦྱོང་དང་སློབ་སྟོན་ཐབས་ལམ།

དབྱེ་བ།	ཐབས་ལམ།	བདུན་ཐག་གཅིག་ནང་ཆུ་ཚོད།	སྦྱོང་འཐུས་ཆུ་ཚོད།
དངོས་འབྲེལ།	གསལ་བཤད།	༢	༤༠
	སྦྱོང་ལྟ།	༡	
	སྤྱན་ཁྱ།	༡	
རང་སྦྱོང།	ལས་འགུལ།	༢	༤༠
	དཔེ་མཛོད།	༢	
སྦྱོང་ཚན་འདིའི་དོན་ལུ་ཡོངས་སྟོམ་ཆུ་ཚོད།		༤	༡༩༠

དབྱེ་ཞིབ་ཐབས་ལམ།

སྦྱོན་ཚན་འདིའི་དོན་ལུ་ དུས་རྒྱུན་དབྱེ་ཞིབ་ཀྱི་ཐོག་ལས་འབད་དགོཔ་ཨིན།

ཀ དུས་རྒྱུན་དབྱེ་ཞིབ་དང་པ། སྤུང་ཐུང་བྱེ་ནི། ངོ་ཤུར་ལས་འགྱུལ (༢༠%)

ཁ་རྒྱན་གྱི་སྤུང་དང་རྐྱེག་བཟོའི་སྤུང་ གང་རུང་གི་ཁྲད་ཆོས་ཚང་བའི་ཐོག་ལས་ ཚོག་འབྲུ་ ५०० ལས་ ७००० གི་བར་ན་ སྤུང་ཐུང་བྱེ་དགོ། ཁ་རྒྱན་གྱི་སྤུང་དང་རྐྱེག་བཟོའི་སྤུང་ གཅིག་རུང་ སྤུང་གི་འབྲུང་རིམ། གནས་དུས། མི་སྣ། རྐྱེགས་གཞི། ཞེ་ཐབས། མཐའ་འཁས་སོགས་ཀྱི་ཁྲད་ཆོས་ཚང་དགོ། སྤུང་དེ་ཡང་ སྤུང་རིང་། སྤུང་འབྱིང་། སྤུང་ཐུང་གསུམ་ལས་ སྤུང་ཐུང་གདམ་སྟེ་ ཚོག་ལྷག་པའི་ཐོག་ལས་བྱེ་དགོ། འོག་གི་ཚད་གཞི་དང་འཁྱིལ་ཏེ་ སྐྱགས་བྱིན་ནི་ཨིན། དབྱེ་ཞིབ་འདི་ལུ་ཐེན་སྟྱིར་བཏང་སྤུང་གི་གནད་ཁྲལས་སྐོར་ལས། སྤུང་གི་ཁྲོད་ཆོས་དང་དབྱེ་བ། སྤུང་གི་བརྗོད་གཞི་ཚུའི་སྐོར་དང་ རྐྱེག་བཟོའི་སྤུང་རེ་གསར་སྟོམ་འབད་དེ་ བྱེ་ཚུགས།

ཤེས་ཚད་ཀྱི་སྡེགས་གྲྭབ།	སྐྱགས་ཀྱི་ཚད་གཞི། ༢༠%			
ཤེས་ཚད་སྡེགས་གྲྭབ་ཀྱི་ནང་གསེས།	སྤུང་འགོ་བཙུགས། (๙%)	བརྗོད་དོན། (๘%)	འབྲུང་རིམ། (๘%)	སྤུང་མཇུག་བསྡུ་ཐབས།(๙%)
(མཚོག་གྲུར།)	སྤུང་གི་བརྗོད་དོན་འདི་གསལ་རིལ་རི་སྦྱ་	སྤུང་གི་འགོ་བཙུག་འབྱི་ཐབས་འདི་ གནམ་མེད་ས་མེད་སྤྱི་བ་ཆེ་ཉོག་ཉོ་སྦྱི་བྱིས་ནུག། (๘)	སྤུང་གི་རིག་སྟོབས་དང་འཁྱིལ་ཏེ་ འབྲུང་རིམ་ཚུའི་ཁོ་རིམ་ཞིབ་པ	སྤུང་གི་བཙུད་དོན་ཚུ་བཉོན་ཏེ་སྡུག་མི་ཚུ་ སྤྱི་བ་ཆེ་ཉོག་ཉོ་སྦྱི་འབྲུང་ཚུགས་པའི་

	ཏ་གོ་ཚུགསཔ་སྦེ་བྲིས་ཏེ་འདུག། (༤)		ར་སྦེ་བཀོད་སྒྲིག་འབད་ནུག། (༦)	གསར་གཏོད་འབད་དེ་མཇུག་བསྡུ་ནུག། (༤)
(རབ)	སྲུང་གི་བརྗོད་དོན་འདི་དེ་ཅིག་གསལ་རིལ་རི་སྦེ་ཏ་གོ་ཚུགས་པས། (༣)	སྲུང་གི་འགོ་བཙུགས་འབྲི་ཐངས་འདི་སྤྲོ་བའི་ཚོར་སྣང་ཨ་ཅི་རེ་འབྱུང་ཚུཏཔ་སྦེ་བྲིས་ནུག། (༥)	སྲུང་དང་འབྲེལ་ཏེ་འབྱུང་རིམ་ཚུའི་གོ་རིམ་ཞིབ་པ་ར་སྦེ་ཡོད་རུང་གཅིག་དེ་ཅིག་འཛོལ་ཏེ་འདུག། (༥)	སྲུང་མཇུག་བསྡུ་འདི་བཅུད་དོན་ཚུ་བཏོན་ཏེ་ཡོད་རུང་ལྷག་མི་ཚུ་སྤྲོ་བའི་དོན་ལུ་གསར་གཏོད་ཆེནམོ་ཅིག་མིན་འདུག། (༣)
(འབྲིང་།)	སྲུང་གི་དོན་ཚན་དང་འབྲེལ་བའི་བརྗོད་དོན་གསལ་རིལ་རི་མིན་འདུག། (༢)	སྲུང་གི་འགོ་བཙུགས་འབྲི་ཐངས་འདི་སྤྲོ་བ་ཡོདཔ་སྦེ་མ་བྲིས་ བས། (༤)	ང་དང་འབྲེལཔ་ད་འབྱུང་རིམ་ཚུའི་གོ་རིམ་བཀོད་ཐངས་ཚུ་ཨ་ཅི་ཅིག་མི་བཏུབ་པས། (༤)	སྲུང་མཇུག་བསྡུ་འདི་ལྷག་མི་ཚུ་སྤྲོ་བ་འབྱུང་ཡོད་རུང་སྲུང་གི་བཅུད་དོན་འདི་གསལ་རིལ་རི་སྦེ་བཀོད་དེ་མིན་འདུག། (༢)
(ཐ)	སྲུང་གི་བརྗོད་དོན་འདི་ག་ཅི་ཨིན་ན། ཏ་ར་གོ་མི་ཚུགས་པས། (༡)	སྲུང་གི་འགོ་བཙུཏ་འབྲི་ཐངས་འདི་དང་འདི་ཟེར་ཏ་མི་གོ་བས། (༣)	སྲུང་གི་འབྱུང་རིམ་ཚུ་སྲུང་དང་འབྲེལ་བའི་གོ་རིམ་ཚུ་མང་ཤོས་ཅིག་གོང་འོག་ནོར་ཏེ་བྲིས། (༣)	སྲུང་མཇུག་བསྡུ་ཐངས་ཀྱི་དམིགས་ཏེ་ར་མེད་པར་ དེ་སྦེ་ར་བྲིས་བཞག་ནུག། (༡)

ཁ འཁྲབ་སྲུང་བྲི་ནི། སྡེ་ཚན་ལས་འགུལ། (༢༠%)

འབྲུག་པའི་ལམ་སྲོལ་དང་འབྲེལ་བ་ཡོད་པའི་སྲུང་དང་གཏམ་བརྒྱུད་དཀོན་དྲག་གི་རིགས་དང་།ཧེ་མའི་འཁྲབ་ཤོག་ཚུ་ལས་ཀྲུ་བཤུས་མེདཔ།སྐད་ཡིག་གཞན་ནང་ལས་སྐད་སྒྱུར་མེད་པའི་འཁྲབ་སྲུང་ཅིག་འོང་དགོ།དེ་ཡང་སྲུང་།གཏམ་བརྒྱུད།ལོ་རྒྱུས་ཚུ་ལུ་གཞི་རྟེན་གྱི་ཐོག་ལས་སྔར་སྲོལ་དང་ད་སྲོལ་གང་རུང་ཅིག་ལུ་བརྗོད་གཞི་ལེགས་ཤོམ་ཅིག་གདམ་སྟེ་འཁྲབ་སྲུང་གི་ཁྱད་རྣམ་འཁྲབ་རྟེདཔ་གཙོ་བོ་དང་ཡན་ལག།མཐོང་སྣང་།གནས་དུས།རྟོགས་གཞི།ཞི་ཐབས།བློ་ཆོག་ཚུ་གཞི་བཀོད་འབད་དེ་ཚང་བའི་འཁྲབ་སྲུང་ཅིག་འོང་དགོ།རབ་ཏུ་བྱུང་ན་རང་གི་རིག་སྟོབས་ལས་གསར་གཏོད་འབད་དེ་ཡོད་པའི་བརྩམས་སྲུང་ ཚིག་འབྲུ་ ༥༠༠ ལས་ ༡༠༠༠ བར་ན་འབད་མི་ འཁྲབ་སྲུང་ཐུང་ཀུ་ཅིག་བྲི་ནི་ཨིན། འདི་ནང་དབྱེ་ཞིབ་ཚར་གཉིས་འབད་ནི། ཟིན་བྲིས་དང་པ་དང་ མཐའ་དཔྱད་དབྱེ་ཞིབ་འདི་འོག་གི་ཚད་གཞི་ཚུ་ལག་ལེན་འཐབ་སྟེ་སྐུགས་ཕྱིན་ནི་ཨིན།དབྱེ་ཞིབ་འདི་གིས་སྤྱིར་བཏང་འཁྲབ་སྲུང་གི་རྒྱབ་ཁུངས་སྐོར་ལས།འཁྲབ་སྲུང་གི་ཁྱད་ཆོས་ངོས་འཛིན་འབད་ནི།གནའ་དེང་འཁྲབ་སྲུང་གི་བརྗོད་གཞིའི་སྐོར་ལས་དང་ ཁྱད་རྣམ་ཚང་བའི་འཁྲབ་སྲུང་རེ་ རྩོམ་བྲིས་འབད་དེ་བྲི་ཚུགས།

སྐུགས་ཀྱི་ཚད་གཞི། (༢༠%)		
ཤེས་ཚད་ཀྱི་ལྷོ་གས་གྲུབ།	**ཟིན་བྲིས་དང་པ།** (༡༠%)	**མཐའ་དཔྱད་དབྱེ་ཞིབ།** (༡༠%)

ཤེས་ཚད་སྡོག་ས་གྲྭབ་ཀྱི་ནང་གསེས།	འགོ་བཙུག་ས་དང་མཇུག་བསྡུ་འཛི་ཐངས། (༡%)	བརྩོད་གཞི། (༡%)	མཐོང་སྣང་། (༡%)	རྟོག་གཞི་དང་ ཞི་ཐབས། (༡%)	འགོ་བཙུག་ས་དང་མཇུག་བསྡུ་འཛི་ཐངས། (༡%)	བརྩོད་གཞི། (༡%)	མཐོང་སྣང་། (༡%)	རྟོག་གཞི་དང་ ཞི་ཐབས། (༡%)
(མཆོག་གྲུབ།)	དོན་ཚན་དང་འཁྲིལ་དམྱ་གཏམ་ལུང་རིའ་ཚུ་དང་ས་ཁ་འཁྲབ་སྐུང་གི་བརྩོད་དོན་འདི་ ཤོག་ཁྲམ་ཐུན་ཚན་སྒྲུབ་ཐབས་ཀྱི་ཐེམ་ཁ་འབྱུག། (༢)	འཁྲབ་སྐུ་ངའི་འགོ་བཙུན་འཛིན་ཐངས་འདི་ གནམ་མེད་ས་མེད་སྐྱོ་བ་ཆེ་ཏོག་ཏོ་སྟེ་ཐིས་ནུག། (༣)	འཁྲབ་སྐུང་གི་མཐོང་སྣང་དང་འབྲུང་རིམ་ཚུ་འེ་རིམ་སྒྲིག་ཚུ་ལེའུ་ཨོམ་སྟེ་ཐིས་ནུག། (༢)	འཁྲབ་སྐུང་གི་རྟོག་ཆེ་ཆུང་གི་དེ་སྟེ་ཡོད་རྒྱང་དཀའ་རྟོན་ཚུ་ཀྱོ་ཀོ་སྟེ་དེ་འཚེལ་ཐྱི་ཐབས་རིགཅ་ཀྱོན་ཏེ་སྟེ་ཞི་ཐབས་འབད་ནུག། (༣)	དོན་ཚན་དང་འཁྲིལ་དམྱ་གཏམ་ལུང་རིའ་ཚུ་དང་ས་ཁ་འཁྲབ་སྐུང་གི་བརྩོད་དོན་ཏེ་ཁ་ཤོས་ཀྱི་ཐེམ་ཁ་འབྱུག། (༢)	འཁྲབ་སྐུང་གི་འགོ་བཙུན་འབྱེ་ཐབས་འདི་ གནམ་མེད་ས་མེད་སྟོང་ཐ་ཆེ་ཏོག་ཏོ་སྟེ་ཐིས་ནུག། (༣)	འཁྲབ་སྐུང་གི་མཐོང་སྣང་དང་འབྲུང་རིམ་ཚུ་འེ་རིམ་སྒྲིག་ཚུ་ལེའུ་ཨོམ་སྟེ་ཐིས་ནུག། (༢)	འཁྲབ་སྐུང་གི་རྟོག་ཆེ་ཆུང་གི་དེ་སྟེ་ཡོད་རྒྱང་དཀའ་རྟོན་ཚུ་ཀྱོ་ཀོ་སྟེ་དེ་འཚེལ་ཐྱི་ཐབས་རིགཅ་ཀྱོན་ཏེ་འཛམ་ཏོང་ཏོ་སྟེ་ཞི་ཐབས་འབད་ནུག། (༣)
(རབ)	འཁྲབ་སྐུང་གི་འགོ་བཙུགས་འབྱེ་ཐབས་འདི་ སྟོང་ཐ་ཡོད་པ་སྟེ་མ་ཐིས་བས། (༡.༤)	འཁྲབ་སྐུ་ངའི་དོན་ཚན་དང་ འཁྲིལ་བའི་བརྩོད་ དོན་གསལ་རིལ་འཛིན་ནུག། (༢.༤)	འཁྲབ་སྐུང་གི་མཐོང་སྣང་དང་འབྲུང་རིམ་བ་ཏོད་ཏོ་ཙེ་ཚུ་ཨ་ཅི་ཅེག་མི་བཏུབ་པས། (༡.༤)	རྟོག་གཞི་ཚུ་ད་ཀུག་ཨ་ཅི་ཅེག་ལས་མེད་རྟུང་ དེ་འཚེལ་ཐྱི་དཀའ་དལ་མེལ་ནི་ལུ་ ཨ་ཅི་ཅེག་ལ་ཐག་བཏང་ནུག། (༢.༤)	འཁྲབ་སྐུང་གི་འགོ་བ སྒུགས་འབྱེ་ ཐངས་འདི་ སྟོང་ཐ་ཡོད་པ་སྟེ་མ་ཐིས་བས། (༡.༤)	འཁྲབ་སྐུང་གི་དོན་ཚན་དང་ འཁྲིལ་བའི་བརྩོད་ ཇོད་དོན་ གསལ་རིལ་རི་ཤ་རི་ མིན་འདུག། (༢.༤)	འཁྲབ་སྐུང་གི་མཐོང་སྣང་དང་ འབྲུང་རིམ་བ་ཏོད་ཏོ་ཙེ་ཚུ་ཨ་ཅི་ཅེག་མི་ བཏུབ་པས། (༡.༤)	རྟོག་གཞི་ཆུང་ཀུ་ཅིག་ལས་མེད་རྟུང་ དེ་འཚེལ་ཐྱི་དཀའ་དལ་མེལ་ནི་ལུ་ ཨ་ཅི་ཅེག་ལྷ་ཁག་བཏང་ནུག། (༢.༤)
(འཕྲིང་)	འཁྲབ་སྐུང་གི་འགོ་བཙུག་འཛིའ་ཐང་ འདི་དང་འདི	འཁྲབ་སྐུ་ངའི་བརྩེ་དོན་འདི་ གཅ་ཅི་ཨིན་ནི	འཁྲབ་སྐུང་གི་མཐོང་སྣང་དང་འབྲུང་རིམ་ཚུ་ མང་ཨོས་ཅིག་མི་བཏུབ་པས། (༡)	རྟོག་གཞི་ཆུང་ཀུ་ཅིག་ལས་མེད་རྟུང་ དེ་འཚེལ་ཐྱི་ དཀའ་དལ་མེལ་ནི་ལུ་གཅ	འཁྲབ་སྐུང་གི་འགོ་བ ཙུན་འཛིའ་ཐང་ འདི་དང་འ	འཁྲབ་སྐུང་གི་འབྲུ་ཐངས་ཀྱི་ཐེམ་ཁ་ཤོ་ཚུ་གཅ་ཅི་ཅེག་ཐེ་ནུག། (༡)	འཁྲབ་སྐུང་གི་མཐོང་སྣང་དང་ འབྲུང་རིམ་ཚུ་ མང་ཨོས་ཅིག་མི་བཏུབ་པས། (༡)	རྟོག་གཞི་ཆུང་ཀུ་ཅིག་ལས་མེད་རྟུང་དེ་འཚེལ་ཐྱི་དཀའ་དལ་མེལ་ནི་ལུ་གཅ་ཅི་ཅེག་ལྷ་ཁག་བཏང་ནུག། (༡)

	་ཐེར་ཏ་མི་གོ་བས། (༡)	ཏ་ར་གོ་མི་ཚུགས་པས། (༢)		ནམ་མེད་ས་མེད་ལཱ་ཁག་བཏང་ཐུབ། (༢)	དེ་ཐེར་ཏ་མི་གོ་བས། (༡)	(༢)		
(ཐ)	འཁྲབ་སྟུང་གི་འགོ་བཙུགས་འབྲི་ཐངས་ར་མིན་འདུག། (.༥)	འཁྲབ་སྟུང་གི་བརྗོད་དོན་འདི་དང་འདི་ཐེར་བའི་ག་ནི་ཡང་སྟོན་ནི་མིན་འདུག། (༡.༥)	མཐོང་སྣང་དང་འབྱུང་རིམ་ཚུ་གོ་རིམ་སྒྲེ་མེན་པར་ག་འཐོབ་རྒྱབ་སྟེ་བྲིས་ཐུབ། (.༥)	འཁྲབ་སྟུང་གི་རྩོམ་གཞི་དང་འབྲེལ་ཏེ་དཀའ་ངལ་ཞི་ཐབས་ཀྱི་དོན་ལུ་འདི་དང་འདི་ཐེརཕ་ག་ནི་ཡང་བཀོད་དེ་མིན་འདུག། (༡.༥)	འཁྲབ་སྟུང་གི་འགོ་བཙུགས་འབྲི་ཐངས་ར་མིན་འདུག། (.༥)	འཁྲབ་སྟུང་གི་བརྗོད་དོན་འདི་དང་འདི་ཐེར་བའི་ག་ནི་ཡང་སྟོན་ནི་མིན་འདུག། (༡.༥)	མཐོང་སྣང་དང་འབྱུང་རིམ་ཚུ་གོ་རིམ་སྒྲེ་མེན་པར་ག་འཐོབ་རྒྱབ་སྟེ་བྲིས་ཐུབ། (.༥)	འཁྲབ་སྟུང་གི་རྩོམ་གཞི་དང་འབྲེལ་ཏེ་དཀའ་ངལ་ཞི་ཐབས་ཀྱི་དོན་ལུ་འདི་དང་འདི་ཐེརཕ་ག་ནི་ཡང་བཀོད་དེ་མིན་འདུག། (༡.༥)

ག དུས་ཐུང་གློག་བརྙན་བཟོ་སྐྲུན་འབད་ནི། སྡེ་ཚན་ལས་འགུལ། (༣༠%)

སློབ་ཁང་གི་སློབ་ཕྲུག་མང་ཉུང་དང་འབྲེལ་ཏེ་སྡེ་ཚན་བཟོ་ཐོག་ལས་དུས་ཐུང་གློག་བརྙན་གྱི་བརྗོད་བྱ་གནའ་དེང་གང་རུང་ཅིག་ལུ་གཞི་བཞག་སྟེ་དུས་ཡུན་སྐར་མ་༥གི་དོན་ལུ་དུས་ཐུང་གློག་བརྙན་བཟོ་སྐྲུན་འབད་དེ་སྤྱན་འབུལ་ཕུལ་དགོཔ་ཨིན།འཁྲུལ་ཆས་འདི་འགྲུལ་འཁྱིན་པར་ཆས་ལག་ལེན་འཐབ་སྟེ་བཟོ་ནི་ཨིན།དེ་ནང་ལུ་གཞུང་སྐད་རྫོང་ཁ་ལུ་གཞན་གྱི་ཁ་སྐད་ལྷད་ཞུགས་མེད་པའི་གློ་ཚིག་ཚུ་འོང་དགོ།གློག་བརྙན་གྱི་གློ་ཚིག་ནང་ལུ་སྒྲ་གདངས།སྐོར་གདངས།དབྱེ་གདངས།ལུང་དྲངས་ཚུ་དགོ།དུས་ཐུང་གི་གློག་བརྙན་ཅིག་ཨིན་རུང་འདི་ནང་འཁྲབ་རྩེདཔ་གཙོ་བོ་དང་ཡན་ལག།མཐོང་སྣང་།གནས་དུས།རྩོགས་གཞི།ཞི་ཐབས།མཐའ་འབྲས་ཚུ་ཚང་བའི་གློག་བརྙན་ཅིག་འོང་དགོ།འདི་ནང་དབྱེ་ཞིབ་ཚར་གཉིས་འབད་ནི་ཨིན།ཟིན་བྲིས་དང་པ་དང་མཐའ་དཔྱད་དབྱེ་ཞིབ་འདི་འོག་གི་ཚད་གཞི་དང་འབྲེལ་ཏེ་སྐུགས་ཕྱིན་ནི་ཨིན།དབྱེ་ཞིབ་འདི་ལུ་བརྟེན་སྤྱིར་བཏང་གློག་བརྙན་གྱི་དགོས་ཁུངས་དང་ཁྱད་ཆོས།གློག་བརྙན་གྱི་དབྱེ་བ་ཚུ་འབྲི་སླབ་འབད་ཚུགས།གློག་བརྙན་གྱིས་མི་སྡེ་ལུ་ཕན་གནོད་དང་གདོང་ལེན་གྱི་སྐོར་ལས་འཚོལ་ཞིབ་འབད་ནི།བརྗོད་གཞི་གནའ་དེང་གང་རུང་ཅིག་ལུ་གཞི་རྟེན་འབད་དེ་དུས་ཐུང་གློག་བརྙན་གསར་སྐྲུན་འབད་དེ་ སྤྱན་འབུལ་ཕུལ་ཚུགས།

སྐུགས་ཀྱི་ཚད་གཞི། (༣༠%)		
ཤེས་ཚད་ཀྱི་ཕྱོགས་གྲུབ།	**ཟིན་བྲིས་དང་པ།** (༡༠%)	**མཐའ་དཔྱད་དབྱེ་ཞིབ།** (༡༠%)

ཤེས་ཚད་སྡོག་ས་གྲྭབ་ཀྱི་ནང་གསེས།	སྒོག་བརྟན་ཀྱི་བརྩོད་དོན། (१%)	མཐོང་སྣང་། (१%)	འཁྲབ་རྩེདས། (१%)	བློ་ཚོག་དང་རྒྱབ་རྟེན་སྟན་ཆ། (१%)	སྒོག་བརྟན་ཀྱི་བརྩོད་དོན། (१%)	མཐོང་སྣང། (१%)	འཁྲབ་རྩེདས། (१%)	བློ་ཚོག་དང་རྒྱབ་རྟེན་སྟན་ཆ། (१%)
(མཆོག་སྒྲུབ།)	སྒོག་བརྟན་འདི་གནའ་དེང་གི་དུས་དང་འཁྱིལ་བའི་གནད་དོན་གྱར་གཞི་བཅོལ་ཏེ་བརྩོད་བྱའི་དོན་ཚུ་གསལ་རིལ་རི་སྒེ་སྡོམས་མས། (३)	སྐུང་གི་མཐོང་སྣང་དང་འཁྱིལ་ཏེ་པར་ཆས་ཚུ་རྩེ་ཕྱུད་ཕྱིན་པ་སྒེ་ལགཔ་ལེན་འཐབ་ནུ་གཱ། (२)	འཁྲབ་རྩེདས་ཚུ་གིས་དཔལ་རབས་དང་སྒོ་བ་ཆེ་ཏོག་ཏོ་སྒེ་འཐུས་མཱོར་མེད་པར་འཁྲབ་སྡོན་འདབ་ཡི། (३)	བློ་ཚོག་སྒྲབ་ནི་ལུ་ཁ་བདེ་ལྷེ་བདེ་དགཱ་དང་། སྐུང་གི་མཐོང་སྣང་དང་འཁྱིལ་ཏེ་རྒྱུ་ཆ་ཡང་ཞོག་ཅིག་ཤོས་ཀྱི་ཐོག་ནས་ཁ་ཐུག་ཏུ་ཡོད་པའི་མ་ཐུད་འབད་ནུ་གཱ། (२)	སྒོག་བརྟན་འདི་ དེ་གནའ་དེང་གི་དུས་དང་འཁྱིལ་བའི་གནད་དོན་གྱར་གཞི་བཅོལ་ཏེ་བརྩོད་ཅུའི་དོན་ཚུ་ ཁས་ལེན་རིལ་རི་སྒེ་སྡོམས་མས། (३)	སྐུང་གི་མཐོང་སྣང་དང་འཁྱིལ་ཏེ་པར་ཆས་ཚུ་ སྒེ་ཕྱུད་ཕྱིན་པ་སྒེ་ལགཔ་ལེན་འཐབ་ནུ་གཱ། (२)	འཁྲབ་རྩེདས་ཚུ་གིས་དཔལ་རབས་དང་ སྒོ་བ་ཆེ་ཏོག་ཏོ་སྒེ་ འཐུས་མཱོར་མེད་པར་འཁྲབ་ སྡོན་འདབ་ནུ་གཱ། (३)	བློ་ཚོག་སྒྲབ་ནི་ལུ་ཁ་བདེ་ལྷེ་བདེ་དགཱ་དང་། སྐུང་གི་མཐོང་སྣང་དང་འཁྱིལ་ཏེ་ རྒྱུ་ཆ་ཡང་ཞོག་ཅིག་ཤོས་ཀྱི་ཐོག་ནས་ཁ་ཐུག་ཏུ་ཡོད་པའི་མ་ཐུད་འབད་ནུ་གཱ། (२)
(རང)	སྒོག་བརྟན་འདི་གནའ་དེང་གི་དུས་དང་འཁྱིལ་བའི་གནད་དོན་གྱར་གཞི་བཅོལ་ཏེ་ཡོད་རུང་ བརྩོད་བྱའི་དོན་ཚུ་ཇ་ཇོ་ཅི་གིས་སྒེ་ལགཔ་ལེན་འདུག། (२.५)	སྐུང་གི་མཐོང་སྣང་དང་འཁྱིལ་ཏེ་པར་ཆས་ཚུ་རབ་སྒེ་ལགཔ་ལེན་འཐབ་ནུ་གཱ། (३.५)	འཁྲབ་རྩེདས་གཙོ་བོ་གིས་སྒེ་བ་ཆེ་ཏོག་ཏོ་འཁྲབ་ཡོད་རུང་ འཁྲབ་རྩེདས་ ३གིས་འཐུས་མོར་བྱུང་ཡི། (२.५)	བློ་ཚོག་སྒྲབ་ནི་ལུ་ཁ་ཇ་ཇོ་རེ་ཁ་དིགཱ་ནི་དང་ སྐུང་གི་མཐོང་སྣང་དང་འཁྱིལ་ཏེ་ཕྱི་སྟན་ཆ་གཅིག་འཐེལ་མཐུད་མི་ན་འདུག། (३.५)	སྒོག་བརྟན་འདི་ དེ་གནའ་དེང་གི་དུས་དང་འཁྱིལ་བའི་གནད་དོན་གྱར་གཞི་བཅོལ་ཏེ་ཡོད་རུང་ བརྩོད་བྱའི་དོན་ཚུ་ཇ་ཇོ་ཅི་གིས་སྒེ་ལགཔ་ལེན་ཆ་སྒེ་ཨིན་འདུག།(२.५)	སྐུང་གི་མཐོང་སྣང་དང་འཁྱིལ་ཏེ་པར་ཆས་ཚུ་རབ་སྒེ་ལགཔ་ལེན་འཐབ་ནུ་གཱ། (३.५)	འཁྲབ་རྩེདས་གཙོ་བོ་གིས་སྒེ་བ་ཆེ་ཏོག་ཏོ་འཁྲབ་ཡོད་རུང་ འཁྲབ་རྩེདས་ ३གིས་འཐུས་མོར་བྱུང་ཡི། (२.५)	བློ་ཚོག་སྒྲབ་ནི་ལུ་ཁ་ཇ་ཇོ་རེ་ཁ་དིགཱ་ནི་དང་ སྐུང་གི་མཐོང་སྣང་དང་འཁྱིལ་ཏེ་ རྒྱུ་ཆ་ཡང་ཞོག་ཅིག་ཤོས་ཀྱི་ཐོག་ནས་ཁ་ཐུག་ཏུ་ཡོད་པའི་མ་ཐུད་འབད་ནུ་གཱ། (३.५)

(འཕྲིང་)	སློག་བརྟན་འདི་གནའ་དེང་གི་དུས་བསྟུན་གཏན་ཀུང་ཡོད་རྩོམ་བཟང་ཐ་ཅི་ཙམ་ཞེན་ཏ། རྟ་གོ་མི་ཚུགས་པས། (২)	པར་ཆས་ཚུ་སྐུང་གི་མཐོང་སྣང་དང་འཁྲིལ་ཏེ་ཡག་ལེན་འཐབ་སྟེ་མི་འདུག། (১)	འཁྲབ་རྩེད་གོང་འཁྲབ་རྩེད་གསུམ་གྱིས་འཐུས་ཤོར་ཡི། (২)	ཁྱོ་ཆོག་ལེའུ་ཤོམ་སྒེ་སྒབ་མ་ཚུད་ཁར་སྐུང་གི་མཐོང་སྣང་དང་འཁྲིལ་ཏེ་རྒྱབ་རྟེན་གྱི་སྐྱན་ཆ་གསུམ་འཛེལ་མ་ཐུབ་མིན་འདུག། (১)	སློག་བརྟན་འདི་གནའ་དེང་གི་དུས་བསྟུན་གཏན་ཀུང་ཡོད་རྩོམ་བརྩོན་ཐ་ཅི་ཙམ་ཞེན་ཏ། རྟ་གོ་མི་ཚུགས་པས། (২)	པར་ཆས་ཚུ་སྐུང་གི་མཐོང་སྣང་དང་འཁྲིལ་ཏེ་ཡག་ལེན་འཐབ་སྟེ་མིན་འདུག། (১)	འཁྲབ་རྩེད་གོང་འཁྲབ་རྩེད་གསུམ་གྱིས་འཐུས་ཤོར་ཡི། (২)	ཁྱོ་ཆོག་ལེའུ་ཤོམ་སྒེ་སྒབ་མ་ཚུད་ཁར་སྐུང་གི་མཐོང་སྣང་དང་འཁྲིལ་ཏེ་རྒྱབ་རྟེན་གྱི་སྐྱན་ཆ་གསུམ་འཛེལ་མ་ཐུབ་མིན་འདུག། (১)
(ཨ)	སློག་བརྟན་འདི་གནའ་དེང་གི་དུས་བསྟུན་གཏན་ཀུང་ཡོད་རྩོམ་བཟང་ཐ་ཅི་ཙམ་ཞེན་ཏ་རྟེན་ཟེར་སྟོན་ནི་མིན་འདུག། (১.৭)	པར་ཆས་ཚུ་སྐུང་གི་མཐོང་སྣང་དང་འཁྲིལ་ཏེ་མེན་པར་གཅིག་ཡོད་ཀྱང་ཡག་ལེན་འཐབ་ཀྱུལ་ཡི། (১.৭)	འཁྲབ་རྩེད་གོང་འཁྲབ་རྩེད་ཡན་ལག་གི་ར་གཅིས་འཐུས་ཤོར་བྱུང་ཡི། (১.৭)	ཁྱོ་ཆོག་དག་དིག་བཏང་ལེའུ་ཤོམ་སྒེ་སྒབ་མ་ཚུད་ཁར་སྐུང་གི་མཐོང་སྣང་དང་འཁྲིལ་ཏེ་རྒྱབ་རྟེན་གྱི་སྐྱན་ཆ་གཅིག་ཡང་མཐའ་ཚུན་ཆགས་ཏེ་ཡོད་པའི་ཁྱད་ཆོས་ཤིག་ཡོད་པ་ཨིན་ནོ་ཟེར་ཏེ་ཁས་ལེན་ཐུབ་ཀྱི་ཡོད། (১.৭)	ཁྱོ་ཆོག་དག་དིག་བཏང་ལེའུ་ཤོམ་སྒེ་སྒབ་མ་ཚུད་ཁར་སྐུང་གི་མཐོང་སྣང་དང་འཁྲིལ་ཏེ་རྒྱབ་རྟེན་གྱི་སྐྱན་ཆ་གཅིག་ཡང་མཐའ་ཚུན་ཆགས་ཏེ་ཡོད་པའི་ཁྱད་ཆོས་ཤིག་ཡོད་པ་ཨིན་ནོ་ཟེར་ཏེ་ཁས་ལེན་ཐུབ་ཀྱི་ཡོད། (১.৭)

ང ཁ་བཤད་ཟིའི་ནི། ངོ་རྒྱང་ལས་འགྱལ། (১৭%)

ཁ་བཤད་འདི་རང་སོའི་གཡུས་སྒོ་ནང་དར་ཁྲབ་ཡོད་པའི་ཁ་བཤད་དང་ལུང་ན་སྒོབ་གྲའི་ཉེ་འདབས་ཀྱི་གཡུས་སྒོ་ཚུ་ནང་སོང་སྟེ་ལས་རིམ་གཅིག་ནང་ལུ་ཁ་བཤད་རྐྱབ་སྟེལ་འདུག་གཟིགས་ཁ་བཤད་ཀྱི་དགོས་ཁྲངས་དང་བཅས་ ཞིབ་འཚོལ་འབད་དེ་ ཁ་བཤད་ཀྱི་ནང་ལུ་བཅད་ལྷག་སྟེལ་མའི་རང་བཞིན་དང་བསྟུན་ངོ་རྒྱང་གི་ལས་འགྱལ་ཚོག་འབྲུ་ ५०० ལས་ १००० གི་བར་ན་འབད་མི་ཁ་བཤད་ཅིག་ཐོག་བྱེ་ནི་ཞིན།འབྲུག་པའི་ལམ་སྟོལ་ནང་ཡོད་པའི་ཁ་བཤད་ཀྱི་རིགས་གི་ཅ་ཅོག་ཐུབ་ནང་སྐད་སྐྱར་འབད་དེ་བྱེ་ཆོག།འོག་གི་ཚད་གཞི་ཚུ་ལག་ལེན་འཐབ་སྟེ་སྐུགས་ཅིན་ནི་ཞིན།

དབྱེ་ཞིབ་འདི་གིས་ཁ་བཤད་ཀྱི་སྐོར་ལས་འཚོལ་ཞིབ་འབད་དེ་ཁ་བཤད་རྒྱབ་ནི་དང་རྩང་མོ་བློ་ཟེ་ཚུ་འཐེན་སྡུར་དང་དཔེ་དོན་སྤྱར་ཏེ་ཕལ་རྩོམ་སྐྱན་རྩོམ་རེ་རང་སྤོའབས་ཀྱི་ཆོག་གསར་རྩོམ་འབད་དེ་ བྱེ་ཚུགས།

ཤེས་ཚད་ཀྱི་ལྟོག་ས་གྲྭབ།	སྐུགས་ཀྱི་ཚད་གཞི། (༧༥%)			
ཤེས་ཚད་སྤྱོགས་གྲྭབ་ཀྱི་ནང་གསེས།	བརྗོད་དོན་ན།(༦%)	གཅོད་མཚམས། (༣%)	སྐྱན་ཆོག (༩%)	འཛེལ་གཏུགས། (༣%)
(མཆོག་གྲུབ)	ཁ་བཤད་ཀྱི་ཡུལ་དུས་གནས་ལུ་དང་བསྟུན་ཏེ་ཁ་བཤད་ཀྱི་གནད་དོན་སྡུན་སུམ་ཆོཊ་ཏོག་ཏོ་སྦེ་བཀོད་དེ་འདུག། (༦)	ཁ་བཤད་དང་འཁྲིལ་ཏེ་ བཅད་ལྷག་སྤེལ་མ་དང་། ཆོག་མཚམས། བརྗོད་མཚམས། དོན་མཚམས་ཚུ་ ཚུལ་མཐུན་སྤེ་བྱིས་ནུག། (༣)	ཁ་བཤད་དང་བསྟུན་པའི་མིང་ཆོག་ གི་ཐ་སྙད་གསར་པ་དང་སྐད་ཡིག་ གི་ཆོག་གཞི་སྡུན་སུམ་ཆོགས་ཏོག་ ཏོ་སྤེ་བྱིས་ནུག། (༥)	རྒྱབ་རྟེན་ཚུལ་མཐུན་བཀོད་ ནུག (༢)
(རབ)	ཁ་བཤད་ཀྱི་ཡུལ་དུས་འཁྲིལ་ཏེ་ ཡོད་རྩང་གནད་དོན་དང་མ་འཁྲིལ་བའི་ཁ་བཤད་ཚ་ཅི་རེ་འདུག། (༥)	ཁ་བཤད་དང་འཁྲིལ་བཅད་ལྷག་སྤེལ་མ་སྤེ་ཡོད་རྩང་། ཆོག་མཚམས་བརྗོད་མཚམས། དོན་མཚམས་ཚུ་ཚ་ཅི་རེ་ཚུལ་མཐུན་མི་ན་ནུག། (༢.༥)	ཁ་བཤད་ཀྱི་མིང་ཆོག་གི་ཐ་སྙད་ གསར་ཡོད་རྩང་སྐད་ཡིག་གི་ཆོག་ གཞི་དེ་ཅིག་སྡུན་སུམ་ཆོཊ་ཏོག་ཏོ་ མིན་འདུག། (༩.༥)	རྒྱབ་རྟེན་ཚུལ་མཐུན་རབ་སྤེ་ བཀོད་ནུག (༡.༥)
(འཁྲིད།)	ཁ་བཤད་འདི་ཡུལ་ཀྱི་གནས་སྐྱངས་འཁྲིལ་རྩང་ གནད་དོན་ལེ་ཤ་ཅིག་ར་མ་ཡོག་བས། (༩)	བཅད་ལྷག་སྤེལ་མ་དང་ཆོག་མཚམས་ བརྗོད་མཚམས། དོན་མཚམས་ག་རའི་ནང་ཚུལ་མཐུན་ སྤེ་མིན་འདུག། (༢)	ཁ་བཤད་ཀྱི་མིང་ཆོག་གི་ཐ་སྙད་ གསར་ཡ་ཅི་རེ་ཡོད་རྩང་སྐད་ཡིག་ གི་ཆོག་གཞི་ཡང་དེ་ཅིག་མིན་འདུ གུ། (༩)	རྒྱབ་རྟེན་ཚུལ་མཐུན་འཁྲིད་ སྤེ་བཀོད་ནུག (༡)
(ཐ)	ཁ་བཤད་འདི་ཡུལ་ཀྱི་གནས་སྐྱངས་དང་འཁྲིལ་རྩང་ གནད་དོན་གྱང་མ་ཡོག་བས། (༢)	བཅད་ལྷག་སྤེལ་མ་དང་ཆོག་མཚམས་ བརྗོད་མཚམས། དོན་མཚམས་ཚུ་ འཁྲིའི་རིའི་རིག་རྒལ་ར་མིན་འདུག། (༡.༥)	ཁ་བཤད་ཀྱི་མིང་ཆོག་གི་ཐ་སྙད་ གསར་ཅིག་མེད་པའི་ཁ་ བཤད་ཡིག་གི་ཆོག་གཞི་ཡང་མིན་འ དུག། (༢.༥)	རྒྱབ་རྟེན་ཚུན་མཐུན་ཐ་མ་སྤེ་ བཀོད་ནུག (.༥)

ཅ འཁྲི་རྩོམ་སྤྱི་ནི། ངོ་རྒྱུད་ལས་འགྲུལ། (༡༥%)

འཁྲི་རྩོམ་ཀྱི་གནད་དོན་གང་རུང་ཅིག་ལུ་གཞི་བཞག་སྤེ་འཁྲི་རྩོམ་ཀྱི་ཚུད་རྣམ་དང་ལྡན་པའི་འཁྲི་རྩོམ་ཆོག་འབྲུ་༤༠༠ལས་ ༡༠༠༠གི་བར་ན་འབད་མི་འཁྲི་རྩོམ་ཅིག་ཐྲི་དགོ།འཁྲི་རྩོམ་ནང་ལུང་འཛེན་དང་རྒྱབ་རྟེན་འབད་ཐངས་ཚུ་ལམ་ལུགས་དང་འཁྲིལ་ཏེ་བཀོད་དགོ།འཁྲི་རྩོམ་འདི་ཤེས་ཡོན་འཁྲི་རྩལ་དང་ལྡན་པ་སྤེ་ཐྲི་དགོ།འདི་ནང་དབྱེ་ཞིབ་ཚར་གཉིས་འབད་ནི་ཞིན།འོག་གི་ཚད་གཞི་དང་འཁྲིལ་ཏེ་སྐུགས་ཐྲིན་ནི་ཞིན།འདུ་ཞིབ་འདི་ལས་སྤྱིར་བཏང་འཁྲི་རྩོམ་ཅར་བའི་སྐོར་ལས།འཁྲི་རྩོམ་གྱི་དབྱེ་བ་དང་འཁྲི་རྩོམ་གྱི་ཁྱད་རྫས་འཛིན་འབད་དེ་ ལུང་རིགས་ཚུ་དྲངས་ཏེ་ འཁྲི་རྩོམ་ཐྲི་ཚུགས།

ཤེས་ཚད་ཀྱི་སྡེ་གས་གྲུབ།	སྐྱགས་ཀྱི་ཚད་གཞི། (๗๫%)			
ཤེས་ཚད་སྡེགས་གྲུབ་ཀྱི་ནང་གསེས།	ངོ་སྤྲོད་དང་མཇུག་བསྡུ།(๔%)	གནད་དོན་དང་འཕྲིལ་ལུང་རིགས། (๘%)	ཡིག་སྒྱོར། (๔%)	གཅོད་མཚམས། (๔%)
(མཆོག་གྲུར།)	དོན་ཚན་གྱི་རྒྱབ་ཁུངས་ངོ་སྤྲོད་དང་དགག་སྒྲུབ་ཀྱི་བཅུད་དོན་བཏོན་ཏེ་མཇུག་བསྡུ་བསར་ཚུ་མཆོག་གྱུར་སྒེ་བཀོད་ནུག། (๔)	འབྲི་རྩོམ་འདི་ དོན་ཚན་དང་འཕྲིལ་དོན་མཚམས་རེའི་ཁུངས་གཟངས་ཡོད་པ་མ་ཚད་དཔེ་གཏམ་ལུང་རིའ་ལྟ་ལས་ལྟག་བཀོད་དེ་ཡིད་ཆེས་འདྲོངས་མ་སྒེ་བྱེས་ནུག། (๘)	ཡི་གུའི་སྒྱོར་བ་ཚུ་འཛོལ་ལེད་པར་བྱེས་ནུག། (๔)	ཆོག་མཚམས། བརྩོད་མཚམས། དོན་མཚམས་ཚུ་བཞག་སྟེ་ ཚུལ་མཐུན་ཏོག་ཏོ་སྒེ་བྱེས་ནུག། (๔)
(རབ)	དོན་ཚན་གྱི་རྒྱབ་ཁུངས་ངོ་སྤྲོད་དང་དགག་སྒྲུབ་བཅུད་བཏོན་ཏེ་མཇུག་བསྡུ་བསར་ཚུ་ རབ་གྲལ་སྒེ་བཀོད་ནུག། (๔.๫)	འབྲི་རྩོམ་འདི་ དོན་ཚན་དང་འཕྲིལ་དོན་མཚམས་རེའི་ཁུངས་གཟངས་ཡོད་པ་མ་ཚད་ དཔེ་གཏམ་ལུང་རིའ་ཚུ་ བཞེ་དེ་ཅིག་བཀོད་དེ་ཡིད་ཆེས་འདྲོངས་སྒེ་བྱེས་ནུག། (๫)	ཡི་གུའི་སྒྱོར་བ་ཚུ་ ཚ་ཅི་རེ་འཛོལ་ཏེ་བྱེས་ནུག། (๔.๫)	ཆོག་མཚམས། བརྩོད་མཚམས། དོན་མཚམས་ཚུ་ ཚ་ཅི་རེ་འཛོལ་ཏེ་ བྱེས་ནུག། (๔.๫)
(འཕྲིད།)	དོན་ཚན་གྱི་རྒྱབ་ཁུངས་ངོ་སྤྲོད་དང་དགག་སྒྲུབ་གྱི་བཅུད་དོན་བཏོན་ཏེ་མཇུག་བསྡུ་བསར་འབྲིང་ཙམ་འདུག། (๔)	འབྲི་རྩོམ་འདི་ དོན་ཚན་དང་འཕྲིལ་དོན་མཚམས་རེའི་ཁུངས་གཟངས་ཡོད་རུང་ དཔེ་གཏམ་ལུང་རིའ་ཚུ་གསུམ་ལས་བཀོད་དེ་མིན་འདུག། (๙)	ཡི་གུའི་སྒྱོར་བ་ཚུ་ ལེ་ཤ་འཛོལ་ཏེ་བྱེས་ནུག། (๔)	ཆོག་མཚམས། བརྩོད་མཚམས། དོན་མཚམས་ཚུ་ ལེ་ཤ་འཛོལ་ཏེ་བྱེས་ནུག། (๔)
(ཐ)	དོན་ཚན་གྱི་རྒྱབ་ཁུངས་ངོ་སྤྲོད་དང་དགག་སྒྲུབ་གྱི་བཅུད་མཇུག་བསྡུ་བསར་ཐ་མ་ལས་མིན་འདུག། (๗.๫)	འབྲི་རྩོམ་འདི་དོན་ཚན་དང་འཕྲིལ་ དོན་མཚམས་རེའི་ཁུངས་ཚ་ཅི་རེ་གཟངས་ནུག། དཔེ་གཏམ་ལུང་རིའ་ཡང་ གཅིག་ལས་བཀོད་དེ་མིན་འདུག། (๔)	ཡི་གུའི་སྒྱོར་བ་ཚུ་ གནམ་མེད་ས་མེད་འཛོལ་ཏེ་བྱེས་ནུག། (๗.๫)	ཆོག་མཚམས། བརྩོད་མཚམས། དོན་མཚམས་ཚུ་ གནམ་མེད་ས་མེད་འཛོལ་ཏེ་བྱེས་ནུག། (๗.๫)

ཆ ཆོགས་བཤད། ངོ་ཤུང་ལས་འགྱུལ། (๗๐%)

ཆོགས་བཤད་འདི་གནད་དོན་གང་རུང་གི་ཐོག་ལས་སྒོ་བ་ཁང་ནང་ཡུ་ཆ་རོགས་དམར་གི་གདོང་ཁར་ཐོན་ཏེ་དུས་ཡུན་སྐར་མ་ ๔ གི་དོན་ལུ་ཆོགས་བཤད་ཀྱི་ཁྲད་ཆོས་ཚང་བའི་ཐོག་ལས་གསལ་བཤད་གཏོར་ཕེལ།ཁའི་ལུ་དབྱེ་ཞིབ་ཚར་གཅིག་འབད་ནི་ཕེལ།འོག་གི་ཚད་གཞི་ཚུ་ལག་ལེ

ན་འཐབ་སྡེ་སྐྱགས་བྱིན་ནི་ཞིན་དུབ་ཁེབ་འདི་ལུ་བརྟེན་ཚོགས་ཨཤད་ཟེར་བའི་དོན་དང་དབྱེ་བ།ལུགས་མཐུན་དང་ལུང་ཡངས་ཚོད་ཨཤད་གཉིས་ཀྱི་སྐོར་ འབྲི་སྒྲབ་འབད་ཚུགས། ཚོགས་ཨཤད་ཀྱི་ཐབས་རིག་འཐོབ་སྡེ་ནི་མང་གི་སྐྱག་ལུ་གསལ་ཨཤད་གཏང་ཚུགས།

ཤེས་ཚད་ཀྱི་སྡེྲགས་སྒྲུབ།	སྐྱགས་ཀྱི་ཚད་གཞི། (๗๐%)			
ཤེས་ཚད་སྡེྲགས་སྒྲུབ་ཀྱི་ནང་གསེལ།	སྐད་ཡིག་དང་རྩོད་སྒྲུ། (๓%)	ཐོག་ཆགས་ཆགས་མེད་པ། (๓%)	སྐད་ཀྱི་སེང་ཕབ། (๗%)	རྣམ་འགྱུར་དང་སྤོབས་པ། (๗%)
(མཆོག་སྒྲུབ།)	དོན་ཚན་དང་འཁྲིལ་ཏེ་ སྐད་ཡིག་གི་མིང་ཚིག་ལག་ལེན་དང་ རྩོད་སྒྲུ་དག་ཏོག་ཏོ་སྟེ་ སྒྲུན་ཞུ་རྩེ་ཕྱད་ཕྱིན་པ། (๓)	གསལ་ཡཤད་ལྷབ་ལྷིབ་དང་ ཐོག་ཆགས་མེད་པ། (๓)	གསལ་ཡཤད་ཀྱི་གནད་ཀ་དང་འཁྲིལ་ཏེ་ རང་བཞིན་གྱི་སྐད་ཀྱི་སེང་ཕབ་མཆོག་སྒྲུ། (๗)	གཟུགས་ཀྱི་རྣམ་འགྱུར་དང་བྱོ་སྤོབས་དཔའ་མ་ཞུམ་མེད་པར་ གསལ་ཡཤད་འབད་ཡོད། (๗)
(རབ)	དོན་ཚན་དང་འཁྲིལ་ཏེ་ སྐད་ཡིག་གི་མིང་ཚིག་ལག་ལེན་དང་ རྩོད་སྒྲུ་དག་ཏོག་ཏོ་སྟེ་ སྒྲུན་ཞུ་རབ། (๓.๔)	གསལ་ཡཤད་ལྷབ་ལྷིབ་དང་ ཐོག་ཆགས་ཟུང་ཙམ། (๗.๔)	གསལ་ཡཤད་ཀྱི་གནད་ཀ་དང་འཁྲིལ་ཏེ་ རང་བཞིན་གྱི་སྐད་ཀྱི་སེང་ཕབ་རབ། (๓.๔)	གཟུགས་ཀྱི་རྣམ་འགྱུར་དང་བྱོ་སྤོབས་ཞུམ་ཙམ་གྱི་གསལ་ཡཤད་འབད་ཡོད། (๗.๔)
(འབྲིང་)	དོན་ཚན་དང་འཁྲིལ་ཏེ་ སྐད་ཡིག་གི་མིང་ཚིག་ལག་ལེན་དང་ རྩོད་སྒྲུ་དག་ཏོག་ཏོ་སྟེ་ སྒྲུན་ཞུ་འབྲིང་། (๓)	གསལ་ཡཤད་ལྷབ་ལྷིབ་དང་ ཐོག་ཆགས་ཆེ་བ། (๗)	གསལ་ཡཤད་ཀྱི་གནད་ཀ་དང་འཁྲིལ་ཏེ་ རང་བཞིན་གྱི་སྐད་ཀྱི་སེང་ཕབ་ཡོད་ མེད་ཙམ། (๓)	གཟུགས་ཀྱི་རྣམ་འགྱུར་དང་བྱོ་སྤོབས་གང་རུང་གི་དཔའ་ཞུམ་ གྱི་གསལ་ཡཤད་འབད་ཡོད། (๗)
(ཐ)	དོན་ཚན་དང་འཁྲིལ་ཏེ་ སྐད་ཡིག་གི་མིང་ཚིག་ལག་ལེན་དང་ རྩོད་སྒྲུ་དག་ཏོག་ཏོ་སྟེ་ སྒྲུན་ཞུ་ཐ་མ། (๗.๔)	གསལ་ཡཤད་ལྷབ་ལྷིབ་དང་ ཐོག་ཆགས་ཆེས་ཆེ་བ། (๔)	གསལ་ཡཤད་ཀྱི་གནད་ཀ་དང་འཁྲིལ་ཏེ་ རང་བཞིན་གྱི་སྐད་ཀྱི་སེང་ཕབ་ཐབས་གཅིག། (๗.๔)	གཟུགས་ཀྱི་རྣམ་འགྱུར་དང་བྱོ་སྤོབས་གཞིས་ཀ་དཔའ་ཞུམ་གྱི་ གསལ་ཡཤད་འབད་ཡོད། (๔)

དབྱེ་ཞིབ་ཐབས་ལམ་དང་ལྟེད་ཚད་ཀྱི་བཀོད་རིས།

ཐབས་ལམ།	དབྱེ་ཞིབ་ཀྱི་དབྱེ་བ།	གྲངས་ཀ།	སྐྱགས་ཀྱི་བརྒྱ་ཆ།
དུས་རྒྱུན་དབྱེ་ཞིབ།	ཀ སྤུང་འབྱི་སྒྲབ་ཉན་གསུམ།	๗	๔๐
	ཁ འཁྲབ་སྤུང་ཐྱི་ནི།	๗	๔๐
	ག ཁ་ཡཤད་འབྱི་སྒྲབ་ཉན་གསུམ།	๗	๗๫
	ང འབྱི་རྩོམ་ཐྱི་ནི།	๗	๗๫
	ཅ གློག་ཐུང་བཟོ་སྐྱན།	๗	๔๐

	ཆ གསལ་བཤད་གཏང་ནི།	༡	༡༠
ཡོངས་སྡོམ།			༡༠༠

སློབ་ཚན། རྫོང་ཁ་ཤེས་ཡོན་འབྲི་རྩལ། LAC101

ནང་དོན།

ལས་ཚན་དང་པ། རྩོམ་རིག།
- ༡.༡ རྩོམ་རིག་གི་སྤྱི་དོན།
- ༡.༢ རྩོམ་རིག།
  - ༡.༢.༡ སྤྱིར་བཏང་གི་རྩོམ་རིག།
  - ༡.༢.༢ སྒྲུ་རྩལ་གྱི་རྩོམ་རིག།
- ༡.༣ རྩོམ་རིག་གི་སྐྱོན་སེལ།

ལས་ཚན་གཉིས་པ། སྒྲུང་།
- ༢.༡ སྤྱིར་བཏང་སྒྲུང་གི་སྤྱི་དོན།
- ༢.༢ སྒྲུང་གི་ཁྱད་རྣམ་དང་དབྱེ་བ།
- ༢.༣ སྒྲུང་གི་བརྗོད་དོན།
- ༢.༤ སྒྲུང་རྩེད་པའི་བཀོད་རིས།
- ༢.༥ སྒྲུང་རྩེད་པའི་བྱ་འགུལ།
- ༢.༦ སྒྲུང་གི་གནས་སྟངས།
- ༢.༧ སྒྲུང་གི་འབྱུང་རིམ།
- ༢.༨ སྒྲུང་གསར་རྩོམ།

ལས་ཚན་གསུམ་པ། འཁྲབ་སྒྲུང་འབྲི་ཐངས།
- ༣.༡ འཁྲབ་སྒྲུང་གི་ངོ་སྤྲོད།
  - ༣.༡.༡ ཟློས་གར་འཁྲབ་སྒྲུང།
  - ༣.༡.༢ གློག་བརྙན་འཁྲབ་སྒྲུང་།
- ༣.༢ གནའ་དེང་འཁྲབ་སྒྲུང་གི་བརྗོད་གཞི།

- ༣.༣ འཁྲབ་སྒྲུང་གི་ཆ་རྐྱེན།

ལྷག་དགོ་པའི་དཔེ་ཐོ།

འེས་པར་དུ་ལྷག་དགོ་པའི་དཔེ་ཐོ།

ཀུན་བཟང་རྡོ་རྗེ། (༢༠༡༡) **བློ་ཟེ་ལྡའི་པི་ཕང་།** འབྲུག། ཐིམ་ཕུ། ནོར་བུ་རབ་བརྟན་པར་ཁང་། རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོ་ཏ།

ཀུན་བཟང་རྡོ་རྗེ། (༢༠༡༥) **དཔེ་གཏམ་དོན་གྱི་རྒྱན་ཚ།** ཐིམ་ཕུ། རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས།

འཆི་མེད་རིག་འཛིན་རྡོ་རྗེ། (༢༠༡༡) **རྩང་མོའི་ཀི་དེབ་བློ་རིག་མེ་ཏོག།** འབྲུག། ཐིམ་ཕུ། ནོར་བུ་རབ་བརྟན་པར་ཁང་། རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས།

རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (༡༩༩༥) **ར་ཙོལ་དང་དབྱངས་སྒྲོན།** འབྲུག། ཐིམ་ཕུ། རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས།

རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (༢༠༡༢) **སྒོག་བརྟན་གྱི་མིང་ཚོག།** འབྲུག། ཐིམ་ཕུ། རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས།

རྩོང་ཁ་གོང་འཕེལ་ལྷན་ཚོགས། (༢༠༡༢) **འབྲུག་གི་ཁ་རྒྱུན་སྤྱང་སྐ་ཙོགས་བསྡེབས་ན་བའི་དགའ་སྟོན།** དེབ་དང་པ། འབྲུག། ཐིམ་ཕུ། སྤྱན་གཉིས་མཐུན་འབེལ་དང་ཤྲུན་དང་པར་སྐྲུན་ཁང་།

ཡེ་ཤེས་དབང་འདུས། (༢༠༡༠) **ཚོགས་བཤད་ཀྱི་ལམ་སྟོན་ལགེ་དེབ་གསར་བསྒྲིགས།** འབྲུག། ཐིམ་ཕུ། ཀེ་ཚེམ་ཀྱི་དཔར་བསྐྲུན་ཁང་།

ཁ་སྐོང་ལྷག་དགོ་པའི་དཔེ་ཐོ།

ཀཱམ་རོ་རྗེ། (༢༠༢༢) **རྩོམ་རིག་ལྷབ་སྤྱང་།** འབྲུག། ཐིམ་ཕུ། ཀུན་གསལ།

བཀྲ་ཤིས་ཕུན་ཚོགས། (༢༠༢༣) **སྐུ་རུལ་རྩོམ་རིག།** འབྲུག། ཐིམ་ཕུ། Bhutan Printing Solutions

སྤྱི་ཚེས: སྤྱི་ཟླ་༤ ༢༠༢༥།

LAC103 Academic Research Skills

Module Code and Title:	LAC103 Academic Research Skills
Programme:	Bachelor of Economic and Political Science, Bachelors of Digital Communication and Project Management, Bachelors 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, analyze 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. Analyze 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

Type	Approach	Hours per week	Total credit hours
Contact	Facilitation and discussion	1.5	**60**
	Writing Workshop/Group work	2	
	Presentations	0.5	
Independent study	Portfolio writing and revising	2	**60**
	Forum participations	0.5	
	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*.

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: *Skillfully 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*.
1 Mark 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*.

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 enhance 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	1	10
	g. Homework, attendance and Participation		25
Total		**100**	

Pre-requisites: None

Subject Matter

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.

Unit II: Audience Awareness and Summarizing

2.1 Audience Analysis and Writing
    2.1.1 Analysing 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.

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.

Unit IV: Finding, Evaluating, and Responding to Sources

3.3 Locating and Documenting Sources
    3.3.1 Techniques for finding relevant sources on a topic and documenting them accurately.
    3.3.2 Strategies for presenting data clearly to readers.
3.4 Integrating Personal Experience with Data
    3.4.1 Blending personal experiences with data to support arguments.
    3.4.2 Using sources effectively to bolster personal ideas.

Unit V: Reflection on Writing

3.5 Self-Awareness and Development as a Writer
    3.5.1 Reflecting on personal growth and development in writing.
    3.5.2 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* (7th ed.). American Psychological Association.

Date: February 2025

Year 2, Semester I

EPS202 Microeconomic Analysis

Module Code and Title: EPS202 Microeconomic Analysis
Programme: Bachelor of Economics and Political Science
Credit: 12
Module Tutor: Karma Yoezer

General Objective

This module offers an in-depth analysis of how the market system coordinates the decisions of consumers, firms, and other economic agents, examining decision-making behaviours and the efficiency and equity implications of different market structures, such as perfect competition and monopolies. It also explores the role of government in addressing market failures and shaping economic behaviour through policies and regulation. Students will gain the ability to apply analytical tools to real-world issues, critically assess challenges faced by firms and industries, and propose solutions to practical economic problems using relevant theoretical frameworks.

Learning Outcomes

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

1. Examine core theories and concepts in microeconomics.
2. Use supply and demand curves to analyse market equilibrium.
3. Use basic economic models to analyse consumer and producer behaviour.
4. Analyse the optimization of consumer welfare across different utility conditions.
5. Identify and differentiate between various market structures.
6. Evaluate the efficiency and welfare implications of different market structures.
7. Identify causes of market failure and assess the effectiveness of government policies.
8. Apply theoretical models to real-world data and case studies.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Lecture and facilitated discussion	1	**60**
	In-class exercises and discussion	1.5	
	Group work	0.5	

	Presentations	1	
Independent study	Discussion paper	1.5	**60**
	Case study	1.5	
	Self-study	1	
Total		8	**120**

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

a. Economic Analysis Paper (15%)
This is an individual assignment and you will complete the assignment of 1000 to 1500 words. Each student will choose ONE topic from unit I. You will write ONE economic analysis paper based on selected topic with consultation with your module tutor. You must use a current events article to write this assignment. Based on the assignment structure learning outcomes, 1,2,3,5 are mostly directly addressed by this assessment. The writing will be assessed based on the following criteria:

Assessment Criteria

4 marks	Understanding and application of economic concepts: *Demonstrates a deep understanding of economic concepts, accurately applies them to relevant scenarios, and provides insightful analysis.*
4 marks	Use of economic models: *Effectively uses appropriate economic models, explaining them clearly and applying them to support analysis in a logical and relevant manner.*
3 marks	Use of evidence and data: *Strong, accurate use of relevant evidence and data, providing clear support for analysis or argumentation.*
2 marks	Logical structures and coherence*: The work is well-organized, ideas flow logically, and the argument is clear and coherent.*
2 marks	Referencing and citation: *Correct and consistent use of appropriate referencing and citation throughout the work.*

b. Project Work (25%)
This assignment consists of two parts:

Part A: Project Report
In this part, students, working in five-person teams, will select a topic from Unit II & III. The team is required to design a project plan, collect relevant economic data, analyse the data, and present the findings in a report. The report should be no more than four pages in length, including a summary table, discussion, and any references. Students must inform the module tutor of their chosen topic early in the semester for feedback and recommendations on resources. Learning outcomes 2,3, and 6 will be assess by this assessment.

Assessment Criteria

3 marks	Introduction: *Clear, concise introduction outlining the purpose and scope of the work.*

4 marks Analysis and evaluation: *In-depth analysis and critical evaluation of key concepts or issues, supported by evidence.*
5 marks Structure and coherence: *Well-organized with logical flow, clear connections between ideas, and a coherent argument.*
3 marks Presentation and referencing: *Clear, professional presentation with accurate referencing and citation.*

Part B: Project Presentation
The second part involves a group PowerPoint presentation summarizing the team's project work. The presentation should last approximately 10-15 minutes, covering key aspects of the project's findings and conclusions.

Assessment Criteria

3 marks Organisation: *Clear structure, logical flow, and effective use of time.*
3 marks Supporting materials: *Relevant and well-integrated materials that enhance the presentation.*
2 marks Language: *Clear, concise, and appropriate language for the audience.*
2 marks Delivery: Confident, engaging delivery with good use of tone and body language.

c. Case Study (30%)
This assignment consists of two parts:

Part A: Case Study Report (20%)
In groups of 5, students will collect data on domestic and international companies and industries. This task will require students to apply relevant economic concepts and principles while identifying and categorizing different market structures, based on the data they provide. Learning outcomes 1, 5, 8 will be assess by this assessment. The case study report will be assessed using the following criteria:

Assessment Criteria

4 marks Data collection and relevance: *Comprehensive and relevant data collection that supports the analysis.*
4 marks Data collection and relevance: *Comprehensive and relevant data collection that supports the analysis.*
5 marks Application of economic concepts: *Clear and accurate application of economic concepts to the topic.*
4 marks Market structure identifications: *Correct identification and explanation of relevant market structures.*
3 marks Critical analysis and discussion: *Insightful analysis and well-supported discussion of key issues.*
2 marks Conclusion and recommendations: *Clear and actionable conclusions with relevant recommendations.*
2 marks Referencing and Citation: *Consistent and accurate referencing and citation throughout.*

Part B: Group Presentation (10%)
Following the case study report, each group will deliver a 15-minute class presentation, summarizing the key findings and insights from their report.

Assessment Criteria

3 marks	Content and relevance: *Accurate, relevant content that addresses the key points.*
3 marks	Clarity and structure: *Well-organized, clear, and easy-to-follow structure.*
2 marks	Visual aids and presentation materials: *Effective use of visual aids that enhance the presentation.*
2 marks	Q&A handling and ability to defend: Confidently handles questions and provides strong, logical responses.

d. Quiz (30%)

Students will complete one quiz towards the end of the semester. Quiz will be for the duration one and half hour long. Students need to revised all the materials covered from week 1 to week 14 including both lectures and essential readings. Note that more weightage is allotted to the last unit V. The quiz will measure learning outcome 1,2,3,4.

Assessment Criteria

Quizzes will be scored by giving marks for the correct answers. It will assess accuracy, application of theories and logical reasoning.

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A (Theory)	a. Economic Analysis Paper	1	15
	d. Quiz	1	25
B (Practical)	b. Case Study	1	30
	c. Project Work	1	30
Total		**100**	

Pre-requisites: None

Subject Matter

Unit I: Introduction

1.1. Definition and scope of economics
1.2. Central economic problems
1.3. Theory of Demand and Supply
1.4. Price Mechanism
1.5. Elasticity and its measurement
1.6. Elasticity of Demand, its types and the Demand Curve
1.7. Elasticity of Supply, its types and the Supply Curve
1.8. Role of government

Unit II: Consumer's Behaviour

2.1 Utility Analysis
  2.1.1 Cardinal Utility Approach
  2.1.2 Ordinal Utility Approach
2.2 Utility maximization
  2.2.1 Law of diminishing marginal utility and law of Equi-marginal utility
  2.2.2 Consumer's behavior and derivation of demand curve
  2.2.3 Consumer Surplus

2.2.4 Water-Diamond Paradox

2.3 Consumer Theory

2.3.1 Consumer Preferences – Weak order preferences and strong order preferences

2.3.2 Indifference Curve Analysis

2.3.3 Budget Line and changes in budget line

2.4 Consumer's equilibrium

2.4.1 Price effect, income effect and substitution effect

2.5 Separation of Income effect and substitution effect from price effect – Hicksian and Slutskian approach.

2.6 Difference between compensating variation in income and cost difference method

2.6.1 Price Consumption Curve (PCC) and Income Consumption Curve (ICC) for normal goods, Giffen goods and inferior goods.

2.6.2 Derivation of price demand curve and income demand curve from PCC and ICC

2.7 Revealed Preference Analysis.

Unit III: Cost of Production

3.1 Market for Inputs

3.2 Production Function

3.2.1 Short-run production functions

3.2.2 Long-run production functions

3.3 Isoquants

3.4 Cost of Production

3.4.1 Short-run cost curves

3.4.2 Long-run cost curves

3.5 Marginal rate of Technical Substitution (MRTS)

3.6 Law of variable proportions and Laws of returns

3.6.1 Returns to a factor vs returns to scale

3.7 Cost minimization and output maximization techniques

3.8 Types of Revenue - total, average, marginal revenues and derivation of revenue curves

3.9 Revenue and firms decision making

Unit IV: Market Structure

4.1 Types of market

4.1.1 Competitive markets, Imperfect competitive markets

4.2 Equilibrium of firm and industry under perfect competition

4.2.1 Short-run equilibrium under perfect competition

4.2.2 Long-run equilibrium under perfect competition

4.3 Monopoly Market: equilibrium conditions and market power

4.4 Equilibrium of monopoly under short-run and long-run

4.5 Discrimination under monopoly

4.5.1 First degree price discrimination

4.5.2 Second degree price discrimination

4.5.3 Third degree price discrimination

4.6 Restraints on and regulation of Monopoly

4.7 Welfare cost of monopoly – deadweight loss

4.8 Oligopoly

4.8.1 Strategic interactions, Game theory

4.9 Monopolistic competition

4.10 Monopsony vs Monopoly

4.11 Duopoly

Unit V: Role of Government

5.1 Conditions for market failure
5.2 Externalities
5.3 Public goods and markets
5.4 Market failure with asymmetric information
5.5 Quality Uncertainty and the Market Mechanism – The Lemon Market

Unit VI: Choice under uncertainty

6.1 Risk and uncertainty – the difference, St. Petersburg paradox
6.2 Choice involving risk
6.3 Risk aversion and risk preference
6.4 Inter-temporal choice
6.5 Choice with endowments
6.6 Labour-Supply – backward bending supply curve
6.7 Choice under Uncertainty
6.8 Von-Neuman Morgenstern utility function

Reading List

Essential Readings

Mankiw, N. (2018) *Principles of Microeconomics* (8th ed.). Boston: Cengage Learning.
Perloff & Jeffrey, M. (2009). *Microeconomics* (5th ed.). Pearson-Addison Wesley.
Pindyck, R.S., Rubinfeld, D., (2013). *Micro Economics* (8th ed.). Prentice Hall.
Koutsoyiannis, (2008). A, *Modern Micro Economics* (2nd ed.). Macmillan: New York.
Snyder, C. & Nicholson, W. (2010). *Fundamentals of Microeconomics*, Cengage Learning (India).

Additional Readings

Case, K.E. & Fair, R.C., (2007). *Principles of Economics* (8th ed.). Pearson Education, Inc.
Frank, Robert, H. (2001). *Microeconomics and Behavior* (4th ed.). McGraw-Hill/Irwin.
Lipsey & Crystal. (2015) *Economics* (13th ed.). Oxford University Press.

Date: February 2025

EPS203 Macroeconomics Analysis

Module Code and Title: EPS203 Macroeconomics Analysis
Programme: Bachelor of Economics and Political Science
Credit: 12
Module Tutor: Thinley Yoezer

General Objective

This module aims to equip students with relevant and real-world techniques and tools to analyze macroeconomic issues such as national output, unemployment, inflation, exchange rates, international trade and finance. Through regional and global case studies, students will also be able to apply their skills to analyze the impact of fiscal and monetary policies in stabilizing macroeconomic conditions. Students will analyze the mechanism and impact of international trade and finance, emphasizing real-world application through the examination of import-export data. In-addition they will explore the working of exchanges rate market and analyze the associated foreign exchange policies

Learning Outcomes

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

1. Identify the process of how the nation's output of goods and services is measured through the national income and product accounts.
2. Explain the components of goods and the financial market and how equilibrium is determined.
3. Analyze the impact of fiscal and monetary policy in goods and financial market using IS-LM model.
4. Demonstrate an understanding of the unemployment and the causes of unemployment and under-employment.
5. Acquire the ability to analyze the impact of inflation in macroeconomic fluctuations.
6. Analyze the mechanism of foreign exchange markets and the exchange rate stabilization policies.
7. Examine the mechanism and impact of international trade and finance.
8. Describe structure and components of Balance of Payments (BOP).
9. Analyze the relationships between BOP and different Exchange Rate Regimes.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Teaching	3	**60**
	In-class exercises, Group work and Presentations	1	
Independent study	Independent Study	2	**60**
	Assignment	2	
Total		8	**120**

Assessment Approach

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

a. Lab-Test (10%)

The students will be assessed on their ability to apply their calculation skills for national accounts through a practical test using real world data based on unit 1. This lab-test will assess their ability to identify the process of how the nation's output of goods and services is measured through the national income and product accounts.

Assessment Criteria

3 marks Accuracy: *Calculations are correct and precise.*
3 marks Code script: *Formulae used are correct for the problem, and the code is functional and follows best practices.*
4 marks Interpretation: *Explains what the results mean in context and addresses any implications or conclusions that can be drawn.*

b. Term Test (20%)

There will be term test covering unit 2 and 3. The test contain a mixture of objective type, short response and extended response questions. The test is to evaluate the student's comprehension on determination of goods and financial market and impact of fiscal and monetary policy using IS-LM model.

c. Presentation (20%)

Students will be allocated into groups to investigate and present the issue of underemployment in developing countries, such as Bhutan, as well as developed countries in the region. This will assess their understanding on underlying causes and socio-economics impact of underemployment. They will be required to examine its underlying causes and effects on the economy using unit 4. They will also develop practical solutions to address this problem.

Assessment Criteria

10 marks Content: *Content is comprehensive, well-researched, and meets the requirements.*
4 marks Delivery: *Verbal communication, tone, pace, and engagement with the audience.*
3 marks Organization: *Clear introduction, body and conclusion.*
3 marks Visual aids: *Good use of visual aids (slides, charts, etc.) to enhance understanding.*

d. Comparative Analysis and Report (25%)

The task assigned to the students in a group is to examine and evaluate the exchange rate stabilization policies implemented by developing and developed countries, with a focus on comparing and contrasting the approaches taken under fixed, flexible, and managed exchange rate regimes, based on unit 5 & 6. The students are expected to analyze the mechanism of foreign exchange markets and the exchange rate stabilization policies.

Assessment Criteria

6 marks Comparison: *Identification of similarities and differences*
5 marks Methodology and analysis: *Clear explanation of the methodology used and its relevance to the research or task.*
5 marks Originality and critical thinking
4 marks Scope and relevance: *Demonstrates unique ideas or approaches, showcasing creativity and independent thinking.*
3 marks Evidences and sources: *Sources are directly related to the topic and support the argument or findings effectively.*
2 marks Presentation and formatting: *Presentation is visually clear, with well-organized content that is easy to follow.*

e. Data based-Lab Project Work (25%)

Students in a group of five are tasked with analysing the balance of payments (BOP) trends in countries that have a BOP surplus vis-à-vis countries that have a BOP deficit. Students are expected to understand the structure and components of BOP and, analyze the relationship between BOP and other macroeconomic variable such as exchange rate, inflation, and unemployment. This will involve gathering data on BOP variables, calculating the BOP, and interpreting the results in relation to the country's' economic performance to write short report using unit 7.

Assessment Criteria

6 marks Accuracy: *Accuracy of calculation*

4 marks Accuracy: *Formula/code script*
4 marks Comparison: *Comparison to current trends*
4 marks Visual aids: *The charts and tables are clear, relevant, and effectively support the presentation's key points.*
3 marks Interconnection: *Relate to other macroeconomic variables*
4 marks Individual Q&A (5-10 mins): *The individual provides clear, insightful, and confident answers to questions, showing a deep understanding of the topic.*

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A (Theory)	a. Term-Test	1	20
	b. Presentation	1	20
	c. Comparative Analysis and Report	1	25
B (Practical)	d. Lab-Test	1	10
	e. Data-based Lab Project Work	1	25
Total		**100**	

Pre-requisites: None

Subject Matter

Unit I: Introduction and National Income Accounting

1.1 Introduction to macroeconomics
1.2 Circular flow of income – closed and open economy models
1.3 Production Possibility Frontier
1.4 National Income Accounting
- 1.4.1 Rules in Computing GDP
- 1.4.2 Gross Domestic Product, Gross National Product, Net Domestic Product, Net National Product, Per capita GDP, Disposable Income
- 1.4.3 National Income at market price and factor cost
- 1.4.4 Nominal and real GDP
- 1.4.5 GDP Deflator
- 1.4.6 Current Accounts and Capital Accounts in National income accounting

Unit II: The Goods and Financial Markets

2.1. The compositions of Goods
2.2. The Demand for Goods
2.3. The determination of Equilibrium Output
2.4. Investment equals saving: an alternative way of thinking about the goods-market equilibrium.
2.5. The Demand for Money
- 2.5.1 Deriving the demand for money

2.6. Determining the interest rate: Part I
    2.6.1 Money demand, money supply, and the equilibrium interest rate
    2.6.2 Monetary policy and open market operation
    2.6.3 The liquidity traps
2.7. Determining the interest rate: Part II
    2.7.1 The supply and demand for central bank money
    2.7.2 The interbank market and the overnight interest rate
    2.7.3 The money multiplier

Unit III: The Goods and Financial Markets: The *IS-LM* model

3.1. The Goods Markets and the IS relation
3.2. Financial Markets and the LM relation
3.3. Putting the IS and the LM relation together
    3.3.1. Fiscal policy activity and the interest rate
    3.3.2. Monetary policy, activity and the interest rate
    3.3.3. The policy-mix
    3.3.4. The IS-LM and the liquidity trap

Unit IV: The Unemployment

4.1. How Economist Define and Compute Unemployment Rate
4.2. Patterns of Unemployment
4.3. Job loss, Job finding, and the Natural Rate of Unemployment
4.4. Job Search and Frictional Unemployment
    4.4.1. Causes of Frictional Unemployment
    4.4.2. Public Policy and Frictional Unemployment
4.5. Real-Wage Rigidity and Structural Unemployment
    4.5.1. Minimum Wage Laws
    4.5.2. Union and Collective Bargaining
    4.5.3. Efficiency wages
4.6. The Cost of Unemployment
4.7. The Labor Market Experience: Bhutan
    4.7.1. The Duration of Unemployment
    4.7.2. Variation of Unemployment Across Demographics Groups
    4.7.3. The Trends in Unemployment
4.8. Case Study of Underemployment Across Economies

Unit V: Inflation

5.1. Inflation – Concepts, types and effects
5.2. Natural rate of inflation and control of inflation
5.3. Derivation of Phillips curve from Aggregate Supply Curve
5.4. Adaptive Expectations and Inflation Inertia
5.5. Disinflation and Sacrifice Ratio
5.6. Rational Expectations and possibility of painless disinflation
5.7. Expectation augmented Phillips Curve; Non-Accelerating Inflationary Rate of Unemployment

Unit VI: Exchange Rate Market

6.1. Exchange rate types and determination
6.2. Exchange rate fluctuations – internal and external balancing
6.3. The Medium Run
    6.3.1. Aggregate Demand under Fixed Exchange Rates

6.3.2. Equilibrium in the Short Run and in the Medium Run
6.4. Fixed Exchange Rates
6.4.1. Pegs, Crawling Pegs, Bands and the EMS
6.4.2. Pegging the Exchange Rate and Monetary Control
6.4.3. Fiscal Policy under Fixed Exchange Rates
6.5. Exchange rate crises under Fixed Exchange Rate
6.6. Exchange Rate Movement under Flexible Exchange Rates
6.6.1. Exchange rate and the Current Account
6.6.2. Exchange Rates and Current and Future Interest Rate
6.7. Choosing between Exchange Rate Regimes
6.7.1. Common Currency Areas
6.7.2. Hard Pegs, Currency Boards and Dollarization

Unit VII: International Trade and Finance

7.1. Measuring Trade Balance
7.2. Trade Balances and Flows of Financial Capital
7.3. The National Saving and Investment Identity
7.4. The Pros and Cons of Trade Deficits and Surpluses
7.5. The Difference between Level of Trade and the Trade Balance
7.6. The Balance of Payments Accounts
7.7. Trade Balances and Flows of Financial Capital
7.7.1. The Current Account
7.7.2. The Capital Account
7.7.3. The Financial Account
7.8. The Balance of Payment and Exchange Rates
7.9. Trade in Goods, Market Equilibrium and the Balance of Trade
7.10. Trade Balances and Flows of Financial Capital
7.11. Capital Mobility
7.11.1. The Mundell-Fleming Model: Perfect Capital Mobility under Fixed Exchange Rates
7.11.2. Perfect Capital Mobility and Flexible Exchange Rates

Reading List

Essential Reading

Blanchard, O., Amighimi, A., and Giavazzi,F. *Macroeconomics: A European Perspective,* Pearson Education Limited, 2010.

Dornbusch, R., Fischer, S., & Startz, R. (2010). *Macroeconomics (11th ed.).* Tata McGraw Hills: New Delhi.

Greenlaw, S. and Shapiro, D. *Principles of Macroeconomics 2e,* OpenStax, 2011.

Mankiw, N. G. (2010). *Macroeconomics (7th ed.).* Worth Publishers: New York.

Additional Reading

Barro, R., & Sala-i-Martin, X. (1995). *Economic Growth*. McGraw-Hill: New Delhi

National Statistical Bureau (various years). Satistica Yearbook of Bhutan.

Romer, P. (1996). *Advanced Macroeconomics*. McGraw-Hill.

Solow, R. (1956*). "A Contribution to the Theory of Economic Growth,"* Quarterly Journal of Economics.

Date: February 2025

EPS204 Development and Behavioral Economics Analysis

Module Code and Title: EPS204 Development and Behavioral Economics Analysis
Programme: Bachelor of Economics and Political Science
Credit: 12
Module Tutor: Uyen Lhendup

General Objective
This module aims to provide students with the basic concepts of development economics and behavioral economics. The students can also analyze traditional development economics and the emerging field of behavioral economics with applications to the real-world problems in development. The broad aim is to insert more behavioral realism into economic theory and thus provide students with a better understanding of the important role that Behavioral Economics plays in explaining consumer and producer behavior.

Learning Outcomes
On completion of the module, students will be able to:
1. Explain the characteristics and diversity of the developing countries.
2. Differentiate between characteristics of developed and developing countries.
3. Analyze economic, social, political and institutional framework of developing countries.
4. Identify development problems and explore solutions to address issue related to development applications.
5. Identify the scope and limitations of the role of market and the state in the development process.
6. Evaluate outcomes of economic development cooperation models.
7. Critically examine the contemporary development debates.
8. Apply behavioral insights to address poverty and promote sustainable development.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Facilitation and discussion	2	**60**
	In-class exercises and writing	0.5	
	Group work	1	
	Presentations	0.5	
Independent study	Case study	1	**60**
	Policy study and group work	1	
	Self-study	2	
Total		8	**120**

Assessment Approach
Following assessments approaches will be used to assess students.

a. Written Assignment (25%)

Students will be required to write one individual essay of 1000-1500 words. The topics will be chosen in consultation with the module tutor on the issues pertaining to the real-world problems. It will be assessed on following criteria:

Assessment Criteria

5 marks Introduction: *specific introduction and conclusion, sequenced material and transitions is clear and consistent, with cohesive content*
4 marks Organization: *Specific introduction and conclusion, sequenced material and transitions is clear and consistent, with cohesive content*
8 marks Evidence and analysis: *Evidence directly supports the argument or research question, and is well-selected.*
3 marks Clarity and coherence: *The content is presented in a clear, straightforward manner, with no ambiguity or confusion.*
3 marks Style and grammar: *The writing is free from grammatical, spelling, and punctuation errors.*
2 marks Referencing and Citation: *All sources are correctly cited and referenced in the appropriate format*

b. Quiz (30%)

Two quizzes will be conducted for the module. One in the mid-semester after completion of Unit IV. The second Quiz will be conducted at the end of the course which includes all the units studied. The questions will be of multiple choice uploaded in the VLE and will be for the duration of one hour.

c. Case Study (20%)

The students will be tasked to do a case study in groups of four to five students. The case study will be on topics related to the microeconomics foundations of development (Market failure and its implications on development, Poverty rights, institutions and development, Human capital and its role in development) and macroeconomics issues in development (Growth and development, Poverty and inequality, and international trade and finance). Students will require to present their findings in the class through group presentations. It will be assessed on following criteria:

Case Study Report Assessment Criteria

3 marks Abstract: *Summarizes key points clearly and concisely.*
2 marks Introduction: *Clearly introduces the topic and outlines the purpose or objective.*
6 marks Discussion/Data analysis: *Data is thoroughly analyzed, with key insights and trends identified.*
4 marks Conclusion and recommendation: *Effectively summarizes the main findings.*

Case Study Presentation Assessment Criteria

1 mark Delivery: *Clear and easy to understand the presentation.*
2 marks Content: *Content is focused, relevant, and addresses key points.*
1 mark Visual appeal: *Uses charts, graphs that supports findings.*

1 mark Question and Answer Session: *Provides clear, accurate, and well-thought-out answers.*

d. Policy proposal/Group project (25%)

In a group of five, the students were assigned with the group project on policy proposal. The module tutor will allocate different countries to the group and the students have to study the country's economic development by measuring the impacts on micro or macro level and identify the policy implemented by the country to curb the problems. The students then have to come up with specific policy to be implemented in Bhutan for better economic growth and development. It will be assessed on following criteria:

Assessment Criteria

8 marks Content and analysis: *Content is directly related to the topic and addresses key issues.*
5 marks Research: *Uses credible, authoritative, and relevant sources.*
3 marks Structure: *Clear, logical organization with a well-defined introduction, body, and conclusion.*
5 marks Implementation and feasibility: *Solutions or recommendations are practical and realistic.*
4 marks Conclusion and recommendations: *Effectively summarizes key findings.*

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A (Theory)	a. Written assignment	1	25
	b. Quiz	2	30
B (Practical)	c. Case study	1	20
	d. Policy proposal	1	25
Total		**100**	

Prerequisites: None

Subject Matter

Unit I: Introduction to Development and Behavioral Economics
1.1 Overview of Development Economics
1.2 Difference developed and underdeveloped countries
1.3 Concepts in Development Economics
1.4 Concepts and foundations of behavioral economics
1.5 Indicators of Development and underdevelopment
1.6 Genesis of development and semantic analysis
1.7 Social and psychological factors in economic behaviors

Unit II: Human Capital and Development
2.1 Role of Human and Physical capital in Development
2.2 Importance of education and health in social welfare
2.3 Impact of social policy programmes on and implementation on development

Unit III: Poverty, Inequality and Institution

3.1 Indicators of Development (Poverty and inequalities)
3.2 Causes and consequences of poverty and inequality in developing countries
3.3 Poverty trap and vicious circles
3.4 Role of Institutions and its implications for Development
3.5 Accounting (scarcity, time-preferences, mental and financial)
3.6 Behavioral barriers to escaping poverty.

Unit IV: Behavioral Theories

4.1 Bounded Rationality and decision-making in low-income settings
4.2 Heuristics and biases in development and its contexts
4.3 Nudges and behavioralist principles in decision making process
4.4 Behavioral intervention in social policy interventions (health, education and savings-decisions)

Unit V: Experimental Approaches in Development Economics

5.1 Methods of experimental approaches – research methods
5.2 Randomized Controlled Trails (RCTs) in development
5.3 Field Experimentation and their applications
5.4 Ethical Considerations in experiments in development
5.5 Case studies of successful RCTs

Unit VI: Application of Development and Behavioral Economics to the Real-World Problems

6.1 Behavioral insights in social and public policies
6.2 Case studies (Conditional cash transfers, microfinance and health interventions)
6.3 Role of technology in development
6.4 Impact evaluation methods and processes in development
6.5 Evaluating the impact of development programmes.

Unit VII: Behavioral Development Economics, Limits and Critiques

7.1 Critiques of RCTs and behavioral economics
7.2 Limitations of nudges and behavioral economics
7.3 Future research and directions in developmental and behavioral economics.

Reading List

Essential Reading

Acemoglu, D., Johnson, s., & Robinson, J.A. (2005). Institutions as a fundamental cause of long-run growth. Handbook of economic growth, 1, 385-142.

Banerjee, A., & Duflo, E. (2011). Poor economics: A radical rethinking of the way to fight global poverty. Public Affairs.

De Janvry, A., Sadoulet, E. (2015). Development Economics: Theory and Practice. United Kingdom: Taylor & Francis.

Additional Reading

Camerer, C. F., Loewenstein, G., & Prelec, D (2008). Behavioural economics: Past, present, abd future. Advances in behavioural economics, 1, 3-56.

Kahneman, D. (2011). Thinking, fast and slow. Macmillan.

Kahneman, D., Knetsch, J. L., & Thaler, R. H (19991). The endowment effect, loss aversion, and status quo bias. Journal of economic perspectives, 5(1), 193-206.

Ray, D, (1998). Development of economics. Princeton University Press.
Sen, A. (1999). The concept of development economics. Handbook of development economics, 1,1-24.
Thaler, R. H., & Sunstein, C.R (2009). Nudge: Improving decisions about health, wealth, and happiness. Penguin.

Date: February 2025

EPS205 Global Public Policy Making

Module Code and Title: EPS205 Global Public Policy Making
Programme: Bachelor of Economics and Political Science
Credit: 12
Module Tutor: Tandin Penjor

General Objective
This module offers a comprehensive exploration of global issues, aiming to equip students with profound insights to influence international policies for enhanced cooperation and progress. Students will engage in understanding the nuanced stages of policy development, critically analyzing challenges faced by policymakers in specific domains like healthcare, education, or environmental regulation, and defining pertinent public policy issues. Additionally, they will evaluate the effectiveness of diverse global policies, gaining essential skills to discern and advocate for informed policy decisions. Students enrolling in this module will delve into fundamental aspects of global public policy making, gaining knowledge about pivotal actors, policy development and implementation processes on a global scale, and the intricate dynamics of challenges and opportunities in global public policy.

Learning Outcomes
On completion of the module, students will be able to:
1. Understand and explain the fundamental concepts and stages of the public policy-making process, including the roles of governments and third-party actors.
2. Identify the main components of policy evaluation, including analyzing the implications of enacted laws and assessing their societal impacts.
3. Illustrate with examples how public policies address specific societal issues, emphasizing their relevance in global contexts.
4. Examine the structure and dynamics of global governance, including regime complexes, orchestration, and legitimacy issues.
5. Analyze the roles and influence of public-private partnerships and informal governance mechanisms in shaping global policy outcomes.
6. Evaluate the significance of global public goods and the concept of bricolage in contemporary global policy-making.
7. Compare and contrast case studies that highlight improvisation and multi-stakeholder approaches in addressing global challenges.
8. Critique the processes of negotiation, goal-setting, and improvisation in policy formation, using the Sustainable Development Goals (SDGs) as a key example.
9. Propose innovative solutions to identified global public policy challenges by integrating theoretical insights with practical considerations.
10. Synthesize insights on sovereignty, universal aspirations, and orchestration by international organizations to propose inclusive and equitable policy frameworks.

Learning and Teaching Approach
Tutors will employ an interactive, student-centred approach, integrating language and critical thinking skills using the following strategies such as demonstrations/modelling, practical exercises and activities such as policy simulation exercise, group work (discussions, problem-solving activities, collaborative and individual tasks, peer feedback and debates), academic essay writing (process learning with diagnosis, feedback and remediation), oral presentation, independent study and VLE discussions over the 120 credit hours.

Type	Approach	Hours per week	Total credit hours
Contact	Lectures and discussion	1	**60**
	In-class exercises and group discussion	1.5	
	Group work	0.5	
	Presentations	1	
Independent study	Identifying key global issues	1.5	**60**
	Preparation for simulation exercises and policy advocacy	1.5	
	Self-study	1	
Total		8	**120**

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

a. Attendance (5%)
Students will receive these marks in accordance to their class attendance eg: 100% attendance at the end of the semester will be awarded 5%.

b. Quiz on Global Public Policy Making (Pop quiz) (10%)
All students will have to individually attempt the Quiz. The continuous assessment for the Global Public Policy Making module consists of two quizzes, each contributing to a total of 10% of the final grade (5% per quiz). These quizzes are designed to evaluate the students' understanding of key concepts, theories, and practical applications discussed in the course. The two Quizzes will be based on Unit I and Unit II.

c. Policy Advocacy and Communication (15%)
This will be a Team assignment, there will be 5 teams each consisting of 5-6 members. This Assessment will be given after the students are cognizant of global policy issues which will be introduced in Unit I and Unit II. Develop a communication strategy to advocate for a specific global policy (Changes and reforms if observed and required). Demonstrate effective communication techniques, considering diverse audiences and channels (Here the group will have to make an advocacy video). Justify the chosen strategy and assess its potential impact. (Submit a report outlining the groups rationale over why they chosen the policy (with relevant supporting literature), Why they chose the strategy, a SWOT analysis of their strategy after the implementation, and also pre- and post-test results of the topic advocated (The policies selected can be from the SDGs).

The objective of this activity is to enhance students' understanding of policy advocacy and communication techniques in the context of advocating for a global policy (change or reform). Students will learn to develop a strategic communication plan, tailor their messaging for diverse audiences, and assess the potential impact of their chosen strategy. The 20 marks will be converted to 15%marks of the overall CA components.

Assessment Criteria

5 marks Communication strategy: *The communication strategy is clearly defined, outlining the key messages, target audience, and communication channels.*
5 marks Effective communication techniques*: The communication techniques chosen (e.g., storytelling, visual aids, persuasive techniques) are effective and well-suited to the strategy.*
5 marks Justification of chosen strategy: *A strong rationale is provided for why the specific communication strategy was chosen, including its alignment with goals and audience need.*
5 marks Assessment of potential impact: *The potential impact of the communication strategy is thoroughly assessed, considering both short-term and long-term effects on the target audience.*

d. Stakeholder Mapping and Analysis (15%)

This will be an individual assignment. This Assessment will be given after the students are cognizant of the key players in global policy making which will be introduced in Unit III and Unit IV. Identify key stakeholders involved in a specific global policy issue. Analyze their interests, roles, and potential influence on policy decisions. Assess how stakeholder dynamics can affect policy outcomes. The objective of this activity is to enhance students' understanding of stakeholder engagement and its importance in global policy-making. Students will identify and analyze stakeholders relevant to a specific global issue, allowing them to grasp the complexities and diverse perspectives involved in addressing the issue at an international level. The 25 marks will be converted to 15%marks of the overall CA components.

Assessment Criteria

5 marks Identification of Key Stakeholders: *The key stakeholders are clearly identified, with a comprehensive list of individuals, groups, or organizations involved or affected by the policy.*
5 marks Analysis of Stakeholder Interests: *The interests of each stakeholder are well-researched and analyzed in depth, outlining their motivations, concerns, and objectives*
5 marks Assessment of Stakeholder Roles: *Each stakeholder's role is clearly defined, including their influence, decision-making power, and responsibilities in the policy process.*
5 marks Evaluation of Stakeholder Influence*: The influence of each stakeholder is evaluated based on their power, resources, and ability to impact policy decisions.*
5 marks Assessment of Stakeholder Dynamics: *The relationships and interactions between stakeholders are clearly understood, with attention given to alliances, conflicts, and power struggles.*

e. Policy Simulation Exercise (20%)

This will be a Team assignment, there will be 5 teams each consisting of 5-6 members. This Assessment will be given after the students are cognizant of the key players in global policy making which will be introduced in Unit III and Unit IV. Participate in a policy simulation activity simulating a global negotiation (e.g., climate change agreements, trade negotiations). Demonstrate negotiation skills, collaboration, and understanding of the policy issue. Reflect on the experience and lessons learned during the simulation. The 25 marks will be converted to 20% marks of the overall CA components.

Assessment Criteria

5 marks Participation and Engagement: *The individual actively participates in discussions, contributing valuable insights and ideas.*
5 marks Negotiation Skills: *Clearly presents arguments and counterarguments, persuading others with well-reasoned points.*
5 marks Collaboration: *Works well within the group, sharing responsibilities and supporting others in achieving common goals.*
5 marks Understanding of the Policy Issue: *Shows a comprehensive understanding of the policy issue, including its complexities and implications.*
5 marks Reflection and Lessons Learned: *Reflects on personal experiences, identifying strengths and areas for improvement.*

f. Global Policy Analysis Paper and Presentation (35%)

The Global Policy Analysis Paper and Presentation assessment is designed to evaluate students' ability to critically analyze a global policy issue, propose evidence-based policy recommendations, and effectively communicate their findings to an audience. The assessment is worth a total of 35 marks, with 25 marks allocated for the policy analysis paper and 10 marks for the presentation.

Policy Analysis Paper Assessment Criteria

4 marks Introduction and Context: *The introduction provides clear context, explaining the importance and relevance of the policy issue.*
4 marks Problem Statement and Background: *The problem is clearly defined, highlighting its significance and impact.*
4 marks Policy Objectives and Alternatives: *The policy objectives are clearly stated, outlining the desired outcomes.*
6 marks Policy Analysis and Evaluation: *The policy is analyzed in detail, with a thorough exploration of its implications, stakeholders, and expected outcomes.*
4 marks Recommendations: *The recommendations are realistic, well-supported, and practical, taking into account potential constraints.*
3 marks Implementation and Monitoring Strategies: *The implementation strategy is well-defined, with actionable steps and timelines.*

Presentation Assessment Criteria

3 marks Clarity and Organization: *The presentation is well-organized with a clear beginning, middle, and end, making it easy for the audience to follow.*
3 marks Presentation Skills (Engagement, Voice, Pace): *The presenter actively engages the audience, maintaining interest throughout the presentation.*
2 marks Use of Visual Aids: *Visual aids are used effectively to enhance understanding,*

support key points, and engage the audience without overwhelming them.

2 marks Ability to Answer Questions and Address Feedback: *The presenter answers questions confidently and accurately, addressing the concerns raised.*

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A (Theory)	a. Quiz	2	10
B (Practical)	b. Attendance	60	5
	c. Policy Advocacy and Communication	1	15
	d. Stakeholder Mapping and Analysis	1	15
	e. Policy Simulation Exercise	1	20
	f. Global Policy Analysis Paper and Presentation	1	35
Total		**100**	

Pre-requisites: None

Subject matter

Unit I: Introduction to Public Policy Process

1.1 Basic Concepts of Public Policy
- 1.1.1 Politics and the Policy Process
- 1.1.2 Meaning and concept of Public Policy
- 1.1.3 Ideas and Problems in the Policy Process
- 1.1.4 What Makes Public Policy Public?
- 1.1.5 Need for Study of Public Policy
- 1.1.6 The Place of Policy Studies in the Social Sciences
- 1.1.7 Evidence and Argument in the Policy Process

1.2 Policy Analysis: What Governments Do, Why They Do It, and What Difference It Makes

1.3 The Policymaking Process: Decision-Making Activities
- 1.3.1 Official Actors and Their Roles in Public Policy
- 1.3.2 The policy cycle model of the policy process

1.4 Roles and responsibilities of Third-party actors
- 1.4.1 Individual Citizens
- 1.4.2 Interest Groups
- 1.4.3 Social Movements and Mobilization
- 1.4.4 Types of Interest Groups
- 1.4.5 Political Parties
- 1.4.6 Think Tanks and Other Research Organizations
- 1.4.7 Communications Media
- 1.4.8 Subgovernments, Issue Networks, and Domains

1.5 Policy Evaluation: Finding Out What Happens After a Law Is Passed

1.6 Global public policy, transnational policy communities, and their networks

Unit II: The Politics of Global Governance

2.1 Global Governance Studies Today

2.2 Regime Complexes and Fragmentation

2.3 Orchestration by the stakeholders
2.4 Informal Governance and Experimentalism
2.5 Legitimacy, Authority, and Contestation
2.6 Global Policymaking
2.7 Global Policymaking at the United Nations
2.8 Public Policy for Global Problems
2.9 Creating Global Policy: Public and Private Constructions

Unit III: Global Policymaking: From Public Goods to Bricolage (Patchwork)

3.1 Global Policymaking: An Overview
3.2 Defining Global Policy
3.3 From Global Public Goods to Bricolage
3.4 Global Public Goods
3.5 Global Bricolage

Unit VI: Global Public Policy making cases and Challenges

4.1 The Sustainable Development Goals: Planning without a Blueprint
4.2 The Making of the SDGs: Open-Ended Improvisation
4.3 An Unscripted Negotiation Process
4.4 Anchoring Sustainable Development in Goal-Setting
4.5 Debating Sustainable Development in “a World that Counts”
4.6 Identifying the Problem
4.7 Determining the Ends
4.8 Means of achieving the ends
4.9 The Human Rights Council: Institution-Building by Doing
4.10 The Protection of Civilians: Policymaking by Fits and Starts

Unit V: Key Trends in the Making of Global Policies: A Comparative Synthesis

5.1 Sovereignty as Centerpiece
5.2 Targeting Individuals
5.3 The Universalization of Aspirations
5.4 A Holistic Approach
5.5 Orchestration by LOs
5.6 Inclusive Policy Making
5.7 Growing Codification
5.8 The Centrality of Experts
5.9 The Resilience of the North–South Cleavage
5.10 Western Hegemony
5.11 Global Policy Persuasion: From Evidence-Based Policy to Science Diplomacy
5.12 Navigating Global Policy Processes

Reading List

Essential Readings

Birkland, T. A. (2019). An introduction to the policy process: Theories, concepts, and models of public policy making. Routledge.
Dye, T. R. (2013). Understanding public policy. Pearson.
Lah, T. J. (Ed.). (2017). The Routledge handbook of global public policy and administration.
Pouliot, V., & Thérien, J. (2023). Global Policymaking: The Patchwork of GlobaL Governance (Cambridge Studies in International Relations). Cambridge: Cambridge University Press.

Stone, D. (2008). Global public policy, transnational policy communities, and their networks. Policy studies journal, 36(1), 19-38.

Additional Readings

McCormick, J., Hague, R., & Harrop, M. (2019). *Comparative government and politics:an introduction*. Bloomsbury Publishing.

Reinicke, W. H., & Copeland, D. (1998). Global public policy: Governing without government. *International Journal*, *53*(3), 597.

Date: February 2025

Year 2, Semester II

EPS206 International Relations

Module Code and Title: EPS206 International Relations
Programme: Bachelor of Economics and Political Science
Credit: 12
Module Tutor: Tashi Jamtsho

General Objective

This module equips students with foundational knowledge of international relations, emphasizing theories, global issues, and the role of small states, particularly Bhutan. Students will develop critical skills in diplomacy, foreign policymaking, and analysis of contemporary global challenges, preparing them for careers in international organizations and global governance.

Learning Outcomes

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

1. Analyze foundational theories and concepts in international relations.
2. Evaluate the role and effectiveness of international law in global politics.
3. Critically assess contemporary global issues and their impact on international relations.
4. Develop practical foreign policy strategies for real-world scenarios.
5. Examine the role of small states in global affairs and their geopolitical strategies.
6. Apply effective communication and negotiation skills in diplomatic settings.
7. Construct informed opinions on complex international issues through independent research.
8. Illustrate practical skills in policy analysis, drafting briefs, and participating in simulated international forums.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Lecture and facilitated discussions	2	**60**
	In-class writing and discussion	0.5	
	Group work	0.5	
	Presentations	1	
	Case study	1.5	**60**

Independent study	Discussion Paper	1.5	
	Self-directed learning	1	
Total		8	**120**

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

a. Quiz (15%)
Students will complete 2 sets of quizzes, individually. Each set will contain 15 scenario-based multiple-choice questions. Quizzes will be administered through the Moodle platform. This assessment will assess students' ability to apply theoretical concepts. The quiz will measure learning outcome 1.

Assessment Criteria
Quizzes will be scored by giving marks for the correct answers. It will assess accuracy, application of theories and logical reasoning.

b. Debate (15%)
Students are required to form groups of 4 members to develop a well-defined argument on key international legal issues, such as sovereignty and humanitarian intervention. Debates on some of the contested provisions of international law will help shed light on the efficacy of international law vis-a-vis power relations in global affairs. The debate has two-pronged benefits: first, it would help students improve their communication skills and organization of thoughts; second, it will would help students stay current and informed on contested provisions of international law. The debate will measure learning outcomes 2, 6 and 7.

Assessment Criteria

6 marks Content: *Specific legal provisions and depth or research.*
6 marks Argumentation*: Clarity, relevance, and response to counterarguments.*
3 marks Language: *Language, articulation, and organization.*

c. Case study (20%)
Students are required to form groups of 5 members to identify and analyze the key contemporary global issues and events such as climate change. Groups will present a 10–15-minute analysis of a selected global issue, accompanied by a policy memo outlining actionable recommendations. The case study will measure learning outcomes 3 and 4.

Assessment Criteria

7 marks Content*: Depth of Analysis*
5 marks Relevancy: *Relevance and contextual understanding*
5 marks Practicality: *Practicality of Recommendations and findings*
3 marks Communication and Presentation: *Effectively communicates the findings.*

d. Discussion paper (25%)
The individual assignment will provide students with an opportunity to develop an informed opinion on a particular issue. Students will get to demonstrate their understanding of the topic and be able to produce independent research work meeting academic standards and

research skills. Students will write an 800-word discussion paper on a topic from Units 4 or 5, integrating theoretical perspectives and empirical examples. This will measure learning outcomes 5 and 7.

Assessment Criteria

8 Marks	Content quality and use of evidence
8 Marks	Argument development: *The argument progresses logically from point to point, with clear connections.*
5 Marks	Clarity and organization: *Information is presented in a straightforward, easy-to-understand manner.*
4 Marks	Citation: *Proper citation and referencing as per APA style*

e. Role play (25%)

Groups of 5 will participate in simulations such as a mock UN session or bilateral trade negotiations. Students will prepare detailed policy briefs and reflect on their experience. Students will be able to draw connections between theoretical ideas and real-world situations. The exercise will help acquire communication, critical thinking, and negotiation. Taking the roles outside their policy and country positions would help study and reflect about their biases - social, economic and political stands. The topics for role plays will be drawn from the third and sixth units, Contemporary global issues and events, and International Organizations and Effective Diplomacy. This will measure learning outcomes 6 and 8.

Assessment Criteria

7 marks	Teamwork and collaboration: *Active participation and meaningful contributions from each team member.*
8 marks	Relevancy: *Relevance of arguments and positions*
7 marks	Content*: Depth of content and analysis*
3 marks	Reflection: *Reflection on experience and learning*

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A (Theory)	a. Quiz	2	15
	d. Discussion paper	1	25
B (Practical)	b. Debate	1	15
	c. Case study	1	20
	e. Role play	1	25
Total		**100**	

Pre-requisites: None

Subject Matter

Unit I: Theories and concepts in International Relations

1.1 Analyze key theories and concepts
    1.1.1 Realism
    1.1.2 Liberalism
    1.1.3 English School
    1.1.4 Constructivism
    1.1.5 Critical Theory
1.2 Explain International Relations as a discipline and international relations as a practice
1.3 Explain globalization and trends in IR
1.4 Fundamentals of IR research

Unit 2: International law

2.1. Sources, nature, and scope of international law
2.2. International law from different mainstream IR theories perspectives
2.3. The applicability of international law pertaining of the sovereign equality of the member states of the United Nations
2.4. Evaluate the efficacy of international law. Case study: Russian invasion of Ukraine

Unit 3: Contemporary global issues and events

3.1. Characteristics of global issues
3.2. Contemporary global issues and events:
    3.2.1. Climate change and pandemic
    3.2.2. Refugees and migration
    3.2.3. Trade and technology
    3.2.4. Cybersecurity and AI ethics
3.3. Contestation of global issues by major countries such as China and India
3.4. Implications of global issues for global politics

Unit 4: Foreign Policy making

4.1. Foreign policymaking process
4.2. The nature and scope of foreign policy
4.3. The actors of foreign policymaking
4.4. Evaluating foreign policy efficacy

Unit 5: Small states in International Relations

5.1. Theoretical perspectives on small states
5.2. External behaviors of small states
5.3. Security strategies of small states
5.4. Bhutan's participation in global forums and organizations

Unit 6: International organizations and effective diplomacy

6.1. Purpose, scope, and nature of international and regional organizations such as the UN and SAARC
6.2. Nature and role of diplomacy
6.3. Characteristics and implications of effective diplomacy on bilateral and multilateral affairs.
6.4. Develop communication strategies in IR including policy briefs and memos.

Reading List

Essential Reading

Chris Alden and Amnon Aran. (2017). *Foreign Policy Analysis: New Approaches* (2nd edition). Routledge

Christine Ingebritsen, Iver Neumann, Sieglinde Gstöhl and Jessica Beyer (eds). (2006). *Small States in International Relations*. University of Washington Press.
Pevehouse, J. C., & Goldstein, J. S. (2017). *International relations*. Pearson Education.
Tim Dunne, Miljia Karki and Steve Smith (eds.) (2021) *International Relations Theories: discipline and diversity* (5th edition). Oxford University Press.
Scott Burchill, Andrew Linklater, Jack Donnelly, Terry Nardin, Matthew Paterson, Christian Reus-Smit, André Saramago, Toni Haastrup, Alina Sajed (2022). *Theories of International Relations*. Bloomsbury Academic

Additional Reading

Henry Kissinger (1994). *Diplomacy.* Simon & Schuster
Jean-Frédéric Morin and Jonathan Paquin (2018). *Foreign Policy Analysis: A Toolbox*. Palgrave Macmillan.
John Ravenhill (eds). (2020). *Global Political Economy* (5th edition). Oxford University Press.
Michael Cox, Tim Dunne, Ken Booth (2001). *Empires, Systems and States: Great Transformations in International Politics*. Cambridge University Press.
Owen E. Hughes and Deirdre O'Neill (2008). *Business, Government and Globalisation.* Palgrave Macmillan.
Steve Smith, Amelia Hadfield, and Tim Dunne (eds.) (2016). *Foreign policy; theory, actors, cases*. Oxford University Press.

Date: February 2025

DAT206 Quantitative Methods for Decision Making

Module Code and Title:	DAT206 Quantitative Methods for Decision Making
Programme:	Bachelors of Economics and Political Science
Credit:	12
Module Tutor(s):	Ugyen Lhendup

General Objective:

This module will equip students with analytical techniques that use mathematics and statistical methods to analyze data to support decision making through a structured objective approach. The primary aim of the module is to enable students to apply these skills for business and management decisions. In order to apply these techniques to real world data, Microsoft Excel will be used. Through this they will develop decision analysis, ability to evaluate uncertain situations and conduct sensitivity analysis. Additionally, students will gain proficiency in statistical inference, hypothesis testing, and forecasting techniques primarily for decision making.

Learning Outcomes:

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

1. Discuss the scope of quantitative methods and approaches in decision making.
2. List the seven steps involved in effective quantitative decision-making process.
3. Explain the potential for using different methods of data presentation in decision making.
4. Evaluate the choices of statistical techniques in decision making and apply them appropriately.
5. Conduct decision analysis using appropriate tools (Decision Trees and Root Cause Analysis).

6. Calculated expected valuation of a possible outcome.
7. Conduct Monte Carlo Simulation using data.
8. Explain the difference between risk and uncertainty in decision making.
9. Calculate and forecast future outcomes based on trend analysis and seasonality estimations.
10. Incorporate time information into a network diagram and identify the critical path for a project.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Facilitation and discussion	1	**60**
	In-class exercises	0.5	
	Group work	1	
	Presentations	1.5	
Independent study	Simulation exercises	1	**60**
	Assignment writing	1.5	
	Self-study	1.5	
Total		8	**120**

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

a. Class Participation (5%)
This mode of assessment is to encourage active classroom participation of the student in their learning. They will be assessed on the following criteria:

Assesment Criteria

1 mark Enagement: *Engagement in class discussion*
2 marks Completion of task: *Note-taking, summarizing and completion of reading Materials*
2 marks Participation: *Engagement in group activities in the class*

b. Class Test (10%)
The purpose of the class test is to evaluate students' ability to comprehend and the concepts of decision making and statistical theory in practice. This class test will cover the first two units and will be for the duration of 30 minutes.

c. Individual Assignment (25%)
This will be used to assess students' understanding of concepts beyond that applied in the class test for the purpose of implementing applied decision-making concepts. The assignments will be for 1000 to 1200 word limit and will be assessed on the following criteria:

Assessment Criteria

2 marks Introduction: *specific introduction and conclusion, sequenced material and transitions is clear and consistent, with cohesive content*
5 marks Concepts: *Clear understanding and accurate explanation of key concepts.*
6 marks Main Body: *Content and Arguments and Debates*
10 marks Understanding oftheories: *Use of concepts and theories of decision making in application*
2 marks References: *All references are correctly cited, with accurate details such author, title, year, and publisher.*

d. Group Project (30%)

A project will be assessed in a group of five students. A real-life decision-making problem will be provided to students in groups by the Tutor. This will assess the collaborative efforts of the students as well as the outcome of the quantitative methods for arriving at the decision based on topics discussed in the syllabus. 2000 to 2500 worded project report will be assessed on the following criteria:

Project Report Assessment Criteria

3 marks Introduction: *specific introduction and conclusion, sequenced material and transitions is clear and consistent, with cohesive content*
5 marks Body: *Literature review on the decision making problem*
5 marks Participation: *Individual contribution and discussion*
5 marks Relevency: *Content, argument and Critique*
2 marks Referencing: *References and APA citation*

Project Prsentation Criteria

2 marks Logical flow of thoughts: *The ideas are logically organized and flow smoothly from one point to the next, ensuring clarity and ease of understanding.*
3 marks Validity of justifications: *The justifications provided are valid, well-reasoned, and supported by strong evidence or logical reasoning.*
2 mark Eloquence and audience awareness: The speaker conveys ideas in a clear and articulate manner, using language that is easy to follow.
3 marks Ability to answer to questions: *The speaker answers questions confidently and accurately, demonstrating a deep understanding of the topic.*

e. Microsoft Excel Analysis – Regression and Forecasting (30%)

This Excel Analysis exercise will be conducted in the Computer Laboratory. Each student will individually be required to submit the analysis on a case of decision making using data. Each student will submit a mini-report of 1000 to 1200 words with the data.

Assessment Criteria

2 marks Use of appropriate tools for the analysis: *The tools used for the analysis are appropriate and well-suited to the research objectives and data type.*
3 marks Literature review and rationale for the use of specific tools: *The literature review is thorough and provides a strong foundation for selecting the tools used in the analysis.*
6 marks Methods and tools of data analysis: *The methods for data analysis are well-defined, with clear steps outlining how the data was processed and*

analyzed.

10 marks Interpretation and Analysis: *The interpretation of data is detailed, insightful, and well-supported by the findings.*

4 marks Post-test estimation and Report: T*he post-test estimation is clearly explained and accurately executed.*

3 marks Structure of the report including APA citation: *The report follows a logical structure, with clear sections that support readability and understanding.*

2 marks Question and Answer: *The presenter demonstrates clear and confident responses during the Q&A session, addressing questions effectively.*

Overview of the assessment approaches and weighting

Continuous assessment	**Areas of assessment**	**Quantity**	**Weighting (%)**
A (Theory)	a. Class participation	1	5
	b. Class test	1	10
	c. Individual assignment	1	25
B (Practical)	d. Group Project	1	30
	e. Microsoft Excel Analysis	1	30
Total		**100**	

Pre-requisites: None

Subject Matter:

Unit I: Introduction to decision making

1.1 Introduction to theories of decision making
1.2 Steps in effective decision-making process
1.3 Use of quantitative methods in decision making
1.4 Introduction to the tools of decision-making process
1.5 Concepts of cost-benefit analysis and opportunity cost in decision making
1.6 Game theory in decision making
1.7 SWOT, PESTLE Analysis and Eisenhower Matrix

Unit II: Quantitative Decision-making Model

2.1 The model of decision-making process
2.2 Predictive Modelling in decision-making
2.3 Introduction to management and decision-making data
2.4 Management Statistics
2.5 Use of computer in decision making

Unit III: Decision-making under Uncertainty

3.1 The decision-making problem
3.2 Maximax and minimax criterion
3.3 The minimax regret criterion
3.4 Decision Trees and reverse diagram
3.5 The value of perfect information

Unit IV: Regression Analysis and Forecasting

4.1 Concept and rationale or forecasting
4.2 Moving Averages

4.3 Regression Analysis Techniques
4.4 Time Series approaches to forecasting
4.5 AR, MA, ARMA and ARIMA forecasting
4.6 Introduction to seasonality and linear detrending methods of forecasting

Unit V: Project Management decision and Simulation

5.1 Characteristics of a project
5.2 Project management and network diagram
5.3 Gantt Charts
5.4 Principles of simulation
5.5 Developing the simulation model

Unit VI: Financial Decision Making

6.1 Principles of Cost-benefit Analysis
6.2 Net Present Value (NPV) estimation
6.3 Break even analysis and business shut down decisions
6.4 Investment appraisal

Reading List

Essential Reading:

Kochenderfer, M. J. (2015). *Decision Making Under Uncertainty: Theory and Application.* United Kingdom: MIT Press.
\Wisniewski, M. (2016). *Quantitative Methods for Decision Makers.* 4th Edition. United Kingdom: Pearson Education.

Additional Reading:

Ceberio, M. & Kreinovich, V. (2023). Decision Making Under Uncertainty and Constraints. A Why-Book. Springer Publications.
Clemen, R. T., Reilly, T. (2013). *Making Hard Decisions with Decision Tools*. United States: Cengage Learning
Curwin, J. (2013). *Quantitative Methods for Business Decisions.* United Kingdom: Cengage Learning.
Sharma, V.; Maheshkar, C. & Poulose, J. (2023). Analytics Enabled Decision Making. Palgrave Macmillan.

Date: Febrarury 2025

DAT207 Applied Econometrics I

Module Code and Title: DAT207 Applied Econometrics I
Programme: Bachelor of Economics and Political Science
Credit: 12
Module Tutor: Karma Yoezer

General Objective

This module will equip students with skills to conduct empirical analysis of econometric data using R. The emphasis of the module is to draw a real-world economic perspective and decisions using local and regional data. Students will learn estimation and inference methods using Ordinary

Least Square (OLS) and apply these methods to real-life data; they will then apply this to both quantitative and qualitative data to evaluate causal relationships and the effects of economic theories.

Learning Outcomes

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

1. Identify types of data and choose methods appropriate to the type of data.
2. Interpret the estimates, standard errors, and tests from different econometric models.
3. Identify issues of violations of assumptions underlying assumptions of models used.
4. Interpret the inference of estimates generated by applying regression models.
5. Use econometric models to identify selection biases and interpret results accordingly.
6. Identify and apply extensions of cross-sectional regression model which addresses special features of alternative data structures.
7. Develop proficiency in a R programming language suitable for econometrics.
8. Apply forecasting techniques used in econometrics.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Lecture	3	**90**
	Practical exercises & Group work	1	
	Data Analysis	2	
Independent study	Independent study	1	**30**
	Project work	1	
Total		8	**120**

Assessment Approach

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

a. Quiz (15%)

By week 4, students will be required to take an individual quiz that encompasses the units on the Overview of Econometrics and Specification of Econometric Model. The quiz aims to evaluate their comprehension of causality theory, econometric methodology, econometric modelling and estimation techniques, as well as the econometric relationship between variables. Learning outcomes 1, 2, 3 will be assess by this assessment.

Assessment Criteria

Quizzes will be scored by giving marks for the correct answers. It will assess accuracy, application of theories and logical reasoning.

b. Class Test (20%)

Upon finishing the unit on Simple Linear Regression Model, individual class tests lasting for 1 hour will be conducted. These tests will evaluate the students' conceptual understanding, estimation skills, inference abilities, and model interpretation. The assessments will be completed by week -7, and each student will be evaluated individually. Learning outcomes 2, 3, 4 will be assess by this assessment.

Assessment Criteria

The assessment will be 100% based on the combination of conceptual knowledge, estimation accuracy, interpretation of results, and understanding of inference in simple linear regression model.

c. Data Analysis (30%)

The students will work in pair and work on data analysis after completing Unit IV. This assignment will assess students' ability to select the appropriate MLR model corresponding to the data. The students will use the data made available by National Statistical Bureau upon consultation with the module tutor. Each group will submit a mini-report of 1000 to 1200 words. Learning outcomes 1, 4,7 will be asses by this assessment.

Assessment Criteria

6 marks	Methods and tools of data analysis: *Appropriately chosen methods and tools, effectively applied to the data.*
8 marks	Interpretation and analysis: *Clear and insightful interpretation of data, with well-supported analysis.*
7 marks	Post-test estimation and report: *Accurate post-test estimations, clearly presented in the report.*
4 marks	Structure of the report: *Well-organized, logical structure with clear sections.*
5 marks	Collective effort of the group as evidence by Q&A: *Evidence of strong teamwork, demonstrated through Q&A performance.*

d. Lab Report – 35%

Part A: Lab Report I

This assessment will have two components. Students will individually submit their first practical lab report in a Word document along with the R script. The first report will be submitted upon completion of Unit III.

Assessment Criteria

2 marks	Data understanding and preparation: *Clear understanding and preparation of data for analysis.*
4 marks	Data visualization: *Effective use of visual tools to present data clearly.*
4 marks	Data analysis and modelling: *Accurate and insightful analysis and application of models.*
3 marks	Interpretation and conclusion: *Logical interpretation of results with clear conclusions.*
2 marks	R script: *Well-written and efficient R script supporting the analysis.*

Part B: Lab Report II

The student will individually submit their second practical report in the form of HTML and PDF using R-Markdown after completing Unit IV. Their HTML/PDF document will be assessed based on their understanding of programming concepts, problem-solving abilities, code implementation skills, and overall proficiency in using programming languages.

Assessment Criteria

4 marks Proficiency in Using Programming Languages: *Demonstrates strong skills and understanding of programming languages.*
5 marks Data visualization: *Effective use of visualization techniques to present data clearly.*
5 marks Data analysis and modelling: *Accurate and insightful data analysis with appropriate modeling.*
4 marks Interpretation and conclusion: *Clear interpretation of results with well-supported conclusions.*
2 marks HTML/PDF report: *Well-structured and professional HTML/PDF report.*

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A (Theory)	a. Quiz	1	15
	b. Class test	1	20
	c. Data analysis	1	30
B (Practical)	a. Lab report I	1	15
	b. Lab report II	1	20
Total		**100**	

Pre-requisites: DAT101: EPS202, DAT101

Subject Matter

Unit I: Introduction to Econometrics

1.1 Definitions and scope of econometrics
1.2 The methodology of econometric research
1.3 Structures of econometric data
1.4 Econometric Data
1.4.1 Types of data
1.4.2 Data source

Unit II: Specification of Econometric Model

2.1 Specification and estimation of an econometric model
2.2 Basic concepts of estimation; Desirable properties of estimators; Unbiasedness, Efficiency,
consistency and sufficiency
2.3 Theoretical and empirical analysis of economic events
2.4 Casual Effects and Forecasting - An Introduction.

Unit III: Simple Linear Regression

3.1 Fundamentals of Regression Analysis
3.2 Statistical vs. deterministic relationships
3.3 Correlation and Regression; Goodness-of-fit test; Estimation of an equation
3.4 Ordinary Least Square (OLS) method
3.4.1 Assumptions
3.4.2 Properties of least square estimators
3.4.3 Gauss-Markov Theorem.
3.5 Testing of regression Coefficients

3.5.1 Test for regression as a whole
3.5.2 Coefficient of determination
3.5.3 t-test
3.5.4 f-test

3.6 Introduction to econometric packages and application of SLR regression in computation of the estimates.

Unit IV: Multiple Linear Regression

4.1 MLR Estimation
4.1.1 Motivation
4.1.2 Mechanics of Interpretation
4.1.3 Partialling-out Analysis
4.1.4 Variance of OLS
4.1.5 Efficiency and Gauss-Markov Theorem

4.2 MLR Inference
4.2.1 Sampling distribution of OLS
4.2.2 Testing Hypothesis about a single population parameter
4.2.3 Confidence Intervals
4.2.4 Testing Multiple linear restrictions and Reporting Regression Results

4.3 Sampling distribution of OLS, Testing Hypothesis about a single population parameter, Confidence Intervals, Testing Multiple linear restrictions and Reporting Regression Results

4.4 OLS Asymptotic – Normality and large sample inferences, asymptotic efficiency of OLS and
further issues (scaling and functional forms)

4.5 Hypothesis testing using econometric packages of the multiple regression estimates and inference; post-testing of assumptions

Unit V: Heteroscedasticity and Multicollinearity

5.1 Problem of heteroscedasticity – consequences and tests
5.2 Multicollinearity - their consequences, tests and remedies
5.3 Serial Correlation
5.4 Specification bias and analysis – Omitted Variable Bias

List of Practical:

The practical sessions will be incorporated and aligned to their respective subject matters. The practical are meant to reinforce student understanding of application of software for data entry, management and analysis of econometric data.

1. Introduction to the software interfaces
2. Data entry and coding for R/Gretl/Stata/EViews (student version)
3. Data manipulation and cleaning
4. Descriptive statistics for understanding econometric data
5. Simple Regression – estimation and inference
6. Multiple Regression – estimation, interpretation and inference
7. Post-estimation and regression diagnostics
8. Regression forecasting

Reading List

Essential Reading

Gujarati, D.N & Porter, D.C (2010), *Essentials of Econometrics* (4th ed.). McGraw-Hill, Inc.:New Delhi.

Jeffrey M., (2016). *Introductory Econometrics: A Modern Approach* (6th ed.). Thomson South-Western, (ISBN: 0324289782).
Wooldridge, J. M. (2010) *Econometric Analysis of Cross Section and Panel Data.* MIT Press.

Additional Reading

Brooks, Chris (2008), *Introductory Econometrics for Finance* (2nd ed.). Cambridge Press: UK (ISBN: 0521873061).
Cambridge University Press: UK
Greene, William H. (2007), *Econometric Analysis* (6th ed.). Prentice Hall (ISBN: 0135132452).
Gujarati, D. N. (2006). *Basic Econometrics* (4th ed.). McGraw-Hill, Inc. (ISBN: 0072478527).
Long, J. S. (1997). *Regression Models for Categorical and Limited Dependent Variables*, Sage Publications: New Delhi (ISBN: 0-8039-7374-8).

Date: February 2025

EPS207 Comparative Public Policy in Advance Societies

Module Code and Title: EPS207 Comparative Public Policy in Advance Societies
Programme: Bachelor of Economics and Political Science
Credit: 12
Module Tutor: Tandin Penjor

General Objective

This module offers an exploration of comparative public policy analysis, centering on advanced societies while contextualizing insights for Bhutan. Students will delve into the comparative assessment of public policies across diverse nations, discerning the influential determinants behind policy variations. Emphasizing contemporary global policy trends, students will grasp the nuances of effective and ineffective policies. Throughout the module, critical examinations will be conducted between policies of advanced nations with that of Bhutan.

Learning Outcomes

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

1. Understand and explain the fundamental concepts and frameworks of comparative public policy, focusing on their relevance to advanced societies and Bhutan.
2. Identify and describe the main factors influencing policy variations across nations, including cultural, economic, and institutional determinants.
3. Illustrate with examples how comparative analysis of public policies in areas like healthcare, education, and housing reveals differences and commonalities in addressing societal challenges.
4. Examine the global policy environment, including the dynamics of governance, transnational networks, and international policy diffusion.
5. Analyze the successes and limitations of specific policies in advanced societies, using comparative case studies to assess their applicability in different contexts.
6. Analyze the adaptation and implementation of foreign policy models in Bhutan, considering local political, cultural, and economic contexts.
7. Compare and contrast policy approaches across advanced societies to identify transferable lessons and best practices, particularly in the context of Bhutan's governance needs.
8. Propose innovative, evidence-based policy solutions to address Bhutanese societal challenges, drawing on insights from comparative analysis of advanced societies.

9. Synthesize comparative policy insights to develop strategic frameworks for evaluating and improving long-term policy outcomes in Bhutan.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Lectures and discussion	1	**60**
	In-class exercises and group discussion	2	
	Presentations	1	
Independent study	Identifying key common issues and providing comparative analysis.	1.5	**60**
	Preparation for in class participation such as debate exercises and policy comparison and analysis	2	
	Self-study	0.5	
Total		8	**120**

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

a. Quiz on Comparative Public Policy in Advance Societies (10%)
The continuous assessment for the Comparative Public Policy in Advance Societies module consists of two quizzes, each contributing to a total of 10% of the final grade (5% per quiz). These quizzes are designed to evaluate the students' understanding of key concepts, theories, and practical applications discussed in the course.

b. Memos (20%)
This is an individual assignment. Choose two different advanced societies and select a policy area of interest (e.g., healthcare, education, environment). Write a comparative policy memo (1500-2000 words) outlining the policy approaches and outcomes in both societies. Analyze the similarities and differences, and discuss potential reasons for these variations. Justify which approach appears more effective and provide evidence from scholarly sources to support your argument.

Assessment criteria

4 marks	Proper identification of Societies and Policy Area: *Societies and the specific policy area is correctly identified, with clear context.*
5 marks	Content and Analysis: *The content is comprehensive and offers a detailed analysis of the issue or topic.*
3 marks	Justification and Evidence: *The arguments or recommendations are well-supported with credible evidence and logical reasoning.*
2 marks	Organization and Clarity: *The work is well-organized, with a clear structure that aids readability and understanding.*
2marks	Writing Style and Presentation: *The writing style is formal and professional, suitable for the subject matter.*

4 marks Critical Thinking and Originality: *The work demonstrates critical thinking, offering a thoughtful analysis and considering different perspectives.*

c. Policy Analysis and Briefing (20%)

This is an individual assignment. Conduct a thorough analysis of a selected public policy in an advanced society. Prepare a policy brief (1500-2000 words) summarizing the policy, its objectives, rationale, stakeholders, and potential impacts. Critically evaluate the policy using appropriate frameworks and models discussed in the course. Incorporate peer-reviewed research and relevant literature to support your analysis. By examining policy issues, comparing approaches in advanced societies, and formulating tailored recommendations, students will enhance analytical and critical thinking skills. They will communicate coherently and incorporate evidence, showcasing adaptability in diverse contexts. The objective is to foster a deeper understanding of policy dynamics and prepare students to propose effective, evidence-based policy solutions for complex societal challenges.

Assessment criteria

10 marks Clarity and Coherence of Writing: *The writing is clear, precise, and easy to understand, without ambiguity or confusion.*
10 marks Problem Statement and Analysis: *The problem is clearly identified, well-defined, and relevant to the topic or issue at hand.*
7 marks Policy Comparison: *A comprehensive comparison of different policies is made, clearly outlining the differences and similarities between them.*
8 marks Policy Recommendation and Justification: *The policy recommendation is clearly stated and well-founded, addressing the problem with a feasible solution.*
5 marks Implementation Strategy: *The implementation strategy is practical, feasible, and considers real-world constraints and challenges.*

d. Case Study Analysis (25%)

This is a group assignment. Select a specific policy case from an advanced society and provide a detailed analysis. Analyze the historical context, policy formulation, implementation challenges, and outcomes. Discuss the role of key actors, interest groups, and public opinion in shaping the policy. Compare this case with another case from a different advanced society, highlighting key differences and similarities.

Assessment criteria

5 marks Case Selection and Relevance: *The selected case is highly relevant to the topic and supports the objectives of the analysis.*
4 marks Comprehensive Analysis: *The analysis thoroughly examines the case, providing detailed insights and examining key factors in depth.*
4 marks Role of Key Actors and Stakeholders: *Key actors and stakeholders are clearly identified, and their roles in the case are effectively outlined.*
3 marks Comparative Analysis: *The comparative analysis provides valuable insights by comparing the case with similar cases or contexts.*
1 mark Organization and Presentation: *The overall organization and presentation of the case is clear, with a logical structure that aids readability.*
3 marks Critical Thinking and Originality: *The work demonstrates critical thinking, offering new perspectives and questioning assumptions.*

e. Class participation (25%)

This course work will be broken into 5 sessions and will initiate after every two weeks of classes. In this coursework, discussion will be prioritized over traditional lectures. While occasional presentations and clarifications may be provided, the primary mode of learning will be through focused discussions. Your active participation is essential to the success of this coursework. It is expected that you complete the assigned readings before each session and arrive prepared to engage in substantive discussions. Please ensure you come ready to raise at least one specific, substantive question based on the readings and our conversations. Participation is assessed based on your understanding of the readings and issues, as well as your contribution to facilitating the learning process for the entire class. It's important to note that a high participation grade isn't determined by the frequency of speaking but by the effectiveness in advancing our understanding collectively. T

Assessment criteria

5 marks Preparation and Engagement
4 marks Contribution to Discussion
3 marks Quality of Questions Raised
3 marks Engagement with Peers' Contributions
5 marks Overall Contribution to Learning Objectives

Overview of the assessment approaches and weighting

Continuous assessment	**Areas of assessment**	**Quantity**	**Weighting (%)**
A (Theory)	a. Quiz	2	10
B (Practical)	b. Memos	2	20
	c. Policy Analysis and Briefing	1	20
	d. Case study analysis	1	25
	e. Class Participation	5	25
Total		**100**	

Pre-requisites: None

Subject matter

Unit I: Introduction to Comparative Public Policy

1.1 Introduction: Why learn lessons from abroad?
- 1.1.1 The need to learn
- 1.1.2 Why foreigners?
- 1.1.3 Applying knowledge

1.2 Understanding programmes and lessons
- 1.2.1 Programmes as building blocks
- 1.2.2 Parallel and interdependent programmes
- 1.2.3 What a lesson is – and is not

Unit II: Public Policy: A Comparative Perspective

2.1 Creating awareness of problems
- 2.1.1 No problem; we're satisfied

2.1.2 Events create problems
2.1.3 Solutions make it easier to face up to problems
2.2 Where to look for lessons
2.2.1 Uses and limits of history
2.2.2 Learning from afar as well as near at hand
2.2.3 Too big or too good to ignore
2.3 The welfare State and the Advance society
2.4 Education policy Finland, Japan and South Korea
2.5 Healthcare policy in Advanced society
2.6 Environmental policy in Advanced society
2.7 Housing policy in Singapore in comparison to Bhutan

Unit III: The Global Policy Environment

3.1 Venturing abroad
3.2 Finding out how a programme really works there
3.3 Forums for learning: official and unofficial
3.4 No substitute for going there
3.5 Turning anecdotes into a model
3.6 What a model is
3.7 What a model leaves out
3.8 Global governance
3.9 Transnational policy networks

Unit IV: Case Studies in Comparative Public Policy

4.1 Social welfare policy in the United States and Sweden
4.2 Education policy in Finland and Japan
4.3 Healthcare policy in Canada and Germany
4.4 Environmental policy in the European Union and China

Unit V: Drawing Lessons for Comparison

5.1 Drawing a lesson and applying a model
5.2 Applying lessons in the European Union
5.3 Should a lesson be adopted?
5.4 Political conflicts about ends and means
5.5 Pressures from abroad
5.6 Can a lesson be applied?
5.7 Inheritance before choice
5.8 Resource limitations
5.9 Mutual misunderstandings
5.9.1 Increasing chances of success
5.9.2 Making the most of contingencies
5.10 Manipulating foreign symbols
5.10.1 Looking ahead
5.10.2 Evaluation – prospective and retrospective
5.10.3 As time goes by: evolution and adaptation

Reading List

Essential Reading

Center for Cultural and Economic Exchange Finland. (n.d.). Introduction to Finland education. Retrieved from

https://www.ccefinland.org/introductiontofinlandeducation#:~:text=The%20main%20objective%20of%20Finnish,to%20higher%20levels%20of%20education.
Jeong, E. (2020). Education Reform for the Future: A Case Study of Korea. *International Journal of Education and Development Using Information and Communication Technology*, *16*(3), 66-81.
Ministry of Education of the Republic of Korea. (n.d.). Korean school system. Retrieved from https://english.moe.go.kr/sub/infoRenewal.do?m=0301&page=0301&s=english#:~:text=The%20Korean%20school%20system%20is,at%20the%20end%20of%20August.
OECD (2018), *Education Policy in Japan: Building Bridges towards 2030*, Reviews of National Policies for Education, OECD Publishing, Paris, https://doi.org/10.1787/9789264302402-en.
Phang, S.-Y., & Helble, M. (2016). Housing Policies in Singapore (ADBI Working Paper Series No. 559). Asian Development Bank Institute. Retrieved from https://www.adb.org/sites/default/files/publication/181599/adbi-wp559.pdf
Rose, R. (2004). *Learning from comparative public policy: A practical guide*. Routledge.
VALLGÅRDA, S. (2007). Public health policies: A Scandinavian model? *Scandinavian Journal of Public Health*, *35*(2), 205–211. http://www.jstor.org/stable/45149839
Ng, K. H. (n.d.). Public housing policy in Singapore [PDF document]. Retrieved from https://lkyspp.nus.edu.sg/docs/default-source/gia-documents/public-housing-policy-in-singapore_with-graphics(1).pdf?sfvrsn=7c4b6c0a_2

Additional Readings

Institute for Global Environmental Strategies. (n.d.). Governance. Retrieved from https://www.iges.or.jp/en/topics/governance?gad_source=1
International Institute for Sustainable Development. (n.d.). Green recovery in the Nordics. Retrieved from https://www.iisd.org/articles/green-recovery-nordics#:~:text=Denmark%2C%20Finland%2C%20Norway%20and%20Sweden,by%202050%E2%80%9D%20a%20legal%20responsibility.
Lee, M. (2023, August 10). Housing lessons from Singapore. PolicyNote. Retrieved from https://www.policynote.ca/singapore-housing/
Michail Melidis & Duncan J. Russel (2020): Environmental policy implementation during the economic crisis: an analysis of European member state 'leader-laggard' dynamics, Journal of Environmental Policy & Planning, DOI: 10.1080/1523908X.2020.1719051. Retrieved form https://doi.org/10.1080/1523908X.2020.1719051
OECD. (2016). Health Policy in Sweden. https://www.oecd.org/els/health-systems/Health-Policy-in-Sweden-July-2016.pdf

Date: February 2025

Year 3, Semester I

DAT307 Applied Econometrics II

Module Code and Title:	DAT307 Applied Econometrics II
Programme:	Bachelor of Economics and Political Science
Credit:	12
Module Tutor:	Karma Yoezer

General Objective

This module will enable students to conduct economic research using quantitative techniques used in advanced econometric methods. Students will learn simultaneous equation models, non-linear econometric modelling and time series methods for forecasting economic variables. Learning this, students will be equipped to evaluate advanced econometric models and theories and be able to evaluate economic policies informed by the causal effects.

Learning Outcomes

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

1. Evaluate economic models using a range of post estimation tests.
2. Present results and provide clear interpretation of the results.
3. Critically analyze and evaluate the results of studies that have been undertaken by others using econometric techniques.
4. Build econometric models and conduct analysis of economic issues.
5. Select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.
6. Evaluate data and integrate economic concepts to understand current economic issues in Bhutan, and propose policy solutions based on their analysis.
7. Develop and apply relevant econometric models for economic analysis and empirical research.
8. Demonstrate proficiency in using econometric software R to conduct quantitative research.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Lecture	3	**90**
	Practical exercises	1	
	Group work	2	
Independent study	Independent study	1	**30**
	Project work	1	
Total		8	**120**

Assessment Approach

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

a. Individual Assignment (20%)

Students will complete one individual assignment of 1000 to 1200 words each, designed to evaluate their understanding of the k-variable model. The learning outcomes 1, 3,4,6 will be evaluated through this assessment. The assignment will be assessed by the module tutor based on the following detailed criteria.

Assessment Criteria

2 marks Understanding of econometric model: *Clear understanding of the econometric model.*

2 marks Identification of merits and limitations of the model: *Accurate identification of the model's strengths and weaknesses.*

2 marks Selection of appropriate procedure to handle the model: *Appropriate method*

chosen to handle the model effectively.

2 marks Presentation and analysis: *Clear and well-structured presentation with thorough analysis.*

2 marks Provide clear interpretation: *Logical and understandable interpretation of the model's results.*

b. Class Test (20%)

Students will be required to appear a written tests of 20 marks for one hour duration. Students will be tested on their ability to make correct interpretations simultaneous equations and identify the issues confronted with these econometric models. The learning outcomes 1,3 4, 5 will be assess by this assessment.

c. Mid-term (30%)

There will be a mid-term examination lasting 2.5 hours, designed to assess students' understanding of econometric concepts and their ability to apply these methods in real-world data analysis. The exam will be divided into two sections: one focusing on theoretical knowledge and the other evaluating practical skills in applying econometric techniques. This mid-term exam provides students with the opportunity to demonstrate their comprehension of econometric models, the key assumptions behind those models, and their practical applications. After completion of the exam, students will showcase their ability to use econometric methods for empirical analysis, addressing learning outcomes 3, 5, and 6.

d. Empirical Project (30%)

Students in a group of 4-5, will complete an empirical fieldwork assignment as part of group research project. In this assignment, students will design and conduct fieldwork, applying econometric techniques to analyze real-world data. The group will collect primary data through surveys or interviews, analyze the data employing econometric models, and present their findings in a well-structured report. This fieldwork project aims to provide students with hands-on experience in econometric methods, understanding data collection challenges, and applying econometrics in a practical, real-world setting. The assignment will contribute to achieving learning outcomes 5, 6, and 8, which focus on the application of econometric techniques to real-world data and the interpretation of econometric results.

Empirical Project Report Assessment Criteria

10 marks Topic selection and research question: *Clear, relevant topic with a well-defined research question.*

20 marks Survey/field work design and data collection: *Effective survey design and thorough data collection process.*

30 marks Data analysis: *The analysis covers all relevant aspects of the data, thoroughly examining patterns, trends, and relationships. Advanced data analysis techniques (regression analysis, hypothesis testing, econometric modeling, etc.) are applied accurately and effectively. All assumptions are clearly stated, and methods are appropriately chosen based on the research question.*

10 marks Report quality and structure: *Well-organized, clear, and professionally written report.*

Empirical Proejct Report Presentation Assessment Criteria

10 marks Clarity of presentation: *The presentation is exceptionally clear, with well-structured slides and concise, easy-to-understand content. Ideas are logically sequenced, and the message is communicated without confusion. Visual aids, such as graphs or charts, are used effectively and support the spoken content.*

10 marks Key findings and results: *Key findings and results are presented in a clear and impactful way, directly addressing the research questions. All results are supported by data and are interpreted effectively. Key patterns or trends are highlighted and explained.*

5 marks Discussion and interpretation: *A well-developed discussion that critically evaluates the results and draws insightful conclusions. The interpretation is logically connected to the findings and is supported by evidence from the data.*

5 marks Presentation delivery: *The presentation is delivered confidently and engagingly. The presenter maintains eye contact, uses an appropriate tone and pace, and is well-prepared. Clear articulation of key points with good use of body language.*

Overview of the assessment approaches and weighting

Continuous assessment	**Areas of assessment**	**Quantity**	**Weighting (%)**
A (Theory)	a. Individual assignment	1	20
	b. Class test	1	20
	c. Mid-term	1	30
B (Practical)	d. Empirical project	1	30
Total		**100**	

Pre-requisites: DAT207

Subject Matter

Unit I: The K-variable Linear Model

1.1 Assumptions
1.2 Estimation of method of OLS
  1.2.1 Calculus method
  1.2.2 Partialling-out Analysis
1.3 Properties of Estimation
1.4 Goodness of Fit
1.5 Coefficient of Determination
  1.5.1 R-Square and Adjusted R-Square
1.6 Hypothesis testing
1.7 K-variable model with dummy variables

Unit II: Simultaneous Equation Model, IV Regression, 1SLS and 2SLS Models

2.1 Nature of simultaneous equation
2.2 Simultaneous Equation Bias in OLS
2.3 Structural and Reduced Form of Models
2.4 The Identification Problems
  2.4.1 Rules for Identification
  2.4.2 Test for Simultaneity
  2.4.3 Tests for Exogeneity

2.5 Approaches to Estimation-Recursive Models and OLS
2.6 The methods of Instrumental Variable (IV) regression
2.7 First stage least square (1SLS) and Second stage least square (2SLS) Methods

Unit III: Non-linear Regression

3.1 Functional form specification of linear equation to non-linear equation and estimation of coefficients
  3.1.1 Linear-linear model
  3.1.2 Log-linear model
  3.1.3 Linear-Log model
  3.1.4 Log-log model
3.2 Maximum Likelihood Estimation Methods
  3.2.1 Ordered Logit and Ordered Probit Models
  3.2.2 Unordered Logit and Unordered Probit Models
  3.2.3 Multinomial Logit and Multinomial Probit Models

Unit IV: Time Series Econometrics and forecasting

4.1 Introduction to time series data in Econometrics
4.2 Difference between cross sectional data and time series data
  4.2.1 Lagged variables
  4.2.2 Autoregressive Distributed Lags (ADL) Models
4.3 Stochastic Process and Stationarity
  4.3.1 Tests of Stationarity
  4.3.2 Unit Root Test
  4.3.3 Cointegration, ECM
  4.3.4 Autocorrelation
  4.3.5 Durbin-Watson test for autocorrelation
  4.3.6 Hausman test
  4.3.7 Serial correlation
  4.3.8 Economic Applications of time series econometrics
4.4 Econometric Forecasting
  4.4.1 AR-MA Model Forecasting
  4.4.2 ARIMA Forecasting
  4.4.3 VAR, SARIMA & GARCH Models

Reading List

Essential reading:

Gujarati, D. (2009). Basic Econometrics. 5th ed. Singapore: McGraw-Hill.
Heij, C., deBoer, P., Franses, P.H., Kloek, T., & van Dijk, H.K. (2004). Econometric Methods with Applications in Business and Economics. New York: Oxford University Press.
Johnston, J., & DiNardo, J. (1997). Econometric Methods. 4th ed. Singapore: McGraw-Hill.
Wooldridge, J. M. (2010) *Econometric Analysis of Cross Section and Panel Data.* MIT Press.

Additional reading:

Brooks, Chris (2008), *Introductory Econometrics for Finance* (2nd ed.). Cambridge Press: UK (ISBN: 0521873061).
Dougherty, C. (2007). *Introduction to Econometrics*. Oxford: Oxford University Press: UK.
Enders, W. (2004), *Applied Econometric Time Series*, New York: John Wiley & Sons.
Greene, W.H. (2003). *Econometric Analysis.* 5th ed. Upper Saddle River, NJ: Prentice Hall.
Kmenta, J. (2008). Elements of Econometrics. Indian Reprint, Khosla Publishing House: New Delhi.

Maddala, G.S. (1983). *Limited-Dependent and Qualitative Variables in Econometrics.*

Date: February 2025

EPS301 Game Theory in Business

Module Code and Title: EPS301 Game Theory in Business
Programme: Bachelor of Economics and Political Science
Credit: 12
Module Tutor: Thinley Yoezer

General Objective
The aim of the module is to equip students to the tools of game theory and its application to critical issues in business, politics and other social sciences. The module covers normal-form and extensive form games and games of perfect and imperfect information, and equilibrium concepts such as Nash Equilibrium and Subgame-Perfect Equilibrium. Hence, students will be able to apply optimal decision-making in various strategic settings and real-world issues.

Learning Outcomes
On completion of the module, students will be able to:
1. Explain the fundamentals of game theory.
2. Illustrate game representations, including strategic form, extensive form, and payoff matrices, to model strategic interactions.
3. Apply the best response analysis to determine the equilibrium of a simultaneous move games.
4. Analyze repeated game scenarios to assess collusion, reputation-building, and cooperation in business interactions.
5. Analyze economic problems associated with uncertainty and information.
6. Formulate business strategies that integrate game-theoretic insights to handle competitive, cooperative, and uncertain market conditions effectively.
7. Apply solution concepts to examples of games, and to state and explain them precisely
8. Identify real-world situations where Game Theory is applicable and model the situation using Game Theory.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Teaching	2	**60**
	Practical exercises and Group work	2	
Independent study	Independent study and 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 (15%)

For this assignment, individual assignment will be assigned for the students to complete three multiple choice quiz of 15 percent. Quiz will be for the duration one and half hour long. Quiz will cover approximately three weeks of material covered in the class. The quizzes are designed to assess the understanding on the fundamental of game theory. Assignment will cover learning outcomes 1,2, and 3.

b. Role Play (15%)

There will be experiments consisting in acting as a player in a game theoretic situation, and playing against the rest of the class. In role play assignment, students will play role assign game like Nash equilibrium, Prisoner Dilemma, etc. in the class. This assignment aims to assess their ability to apply the best response analysis to determine the equilibrium of a simultaneous move games with application to decision-making. Learning outcomes 3,4, and 7 will be covered by this assignment.

Assessment Criteria

5 marks	Details and information*: The information provided is thorough, with sufficient details to support key points.*
5 marks	Techniques: *The techniques used are appropriate for the task, whether it's analytical methods, presentation techniques, or problem-solving.*
5 marks	Expression and Body language: *The speaker expresses ideas clearly and engages the audience with confident and open body language.*

c. Problem Sets (25%)

To help students gain ease in applying the tools of game theoretic analysis to the situations, students will participate in during the class, there will be almost weekly problem sets. Students are encouraged to discuss the problem sets with their classmates, but every student has to write up and submit their own individual solutions. Problem sets will be posted on the class website via VLE and their due dates are listed in the schedule. Students can download it from the class website on the dates assigned. Late problem sets will not be accepted. In particular, problem sets must be received in class by the end of lecture on the day the problem sets are due. Problem sets will be handed back to you in the class immediately after the due date. The assignment will cover learning outcomes 5,6, and 8.

d. Mid-term (20%)

There will be one midterm and it will be worth of 20 percent. The midterm will cover all the materials up to the beginning of the extensive-form games. The particular timing of the midterm will be determined together with the students in the class. Moreover, the details of the procedures to be applied in connection with the midterm will be announced via VLE prior to the exam. Learning outcomes 1,3, 5, and 8 will be covered by this assignment.

e. Modelling Project and Presentation (25%)

A student in a group of five will apply game theoretic tools to a strategic situation of their interest. This situation could be a real-life social interaction, come from something they read in the news, or more generally, any situation in which the benefits or costs of a choice by one agent depend on others' actions. Students in a group will first find the strategic situation they think can be modelled with one of the games covered in class, they will write a short report (3 pages maximum). Project report will be followed by 15-minutes class presentation by the groups. Students are expected to formulate business strategies that integrate game-theoretic

insights to handle competitive, cooperative, and uncertain market conditions effectively. Learning outcomes 6 and 8 will be assessed by this assignment.

Project Report Assessment criteria

3 marks Motivation: *The motivation for the game or analysis is clearly stated, outlining why it's important and relevant.*
4 marks Game Description: *The game is described clearly and in detail, with an emphasis on its structure, rules, and mechanics.*
5 marks Equilibrium analysis: *The analysis of the game's equilibrium is thorough, demonstrating a strong understanding of economic or game theory principles.*
3 marks Conclusion: *The conclusion effectively summarizes the main findings or outcomes from the game analysis.*

Presentation Assessment Criteria

4 marks Coherence with the case study report and overall organization: *The presentation aligns well with the content of the case study, accurately reflecting its key points and findings.*
3 marks Individual presentation skills: *The presenter speaks clearly and confidently, ensuring effective communication of key points.*
3 marks Performance in question-answer session: *The presenter responds thoughtfully and accurately to questions, demonstrating a solid understanding of the topic.*

Overview of the assessment approaches and weighting

Continuous assessment	**Areas of assessment**	**Quantity**	**Weighting (%)**
A (Theory)	a. Modelling Project and Presentation	1	25
	b. Quiz	1	15
	c. Midterm	1	20
B (Practical)	d. Role Play	1	15
	e. Problem Sets	1	25
Total		**100**	

Pre-requisites: None

Subject Matter

Unit I: Basic of Game Theory

1.1 Key definition; players, strategies, payoffs, outcome, rationality
1.2 Types of games
  1.2.1 Cooperative vs non-cooperative games
  1.2.2 Zero-sum games vs non-zero-sum games
  1.2.3 Simultaneous vs sequential moves

1.3 Representations of games; strategic form, extensive form, and payoff matrices
1.4 Solution concepts: Introduction to equilibrium ideas (Nash equilibrium in simple setting) illustration
1.4.1 Prisoners' dilemma
1.4.2 Coordination games
1.4.3 Matching pennies

Unit II Static Games of Complete Information

2.1. Basic Theory: Normal-Forms Games and Nash Equilibrium
2.2.1 Normal-Forms Representation of Games
2.2.2 Iterated Elimination of Strictly Dominated Strategies
2.2. Applications of Game theory
2.2.1 Cournot Model of Duopoly
2.2.2 Bertrand Model of Duopoly
2.2.3 Final-Offer Arbitration
2.2.4 The Problem of the Commons
2.3. Advanced Theory: Mixed strategy and Existence of Equilibrium
2.3.1 Mixed Strategies
2.3.2 Existence of Nash Equilibrium
2.3.3 Bertrand Duopoly

Unit III: Dynamic Games of Complete Information

3.1 Dynamic Games of Complete and Perfect Information
3.1.1 Theory: Backwards Induction
3.1.2 Stackelberg Model of Duopoly
3.1.3 Wages and Employment in a Unionized Firm
3.1.4 Sequential Bargaining
3.2 Two- Stages Games of Complete but Imperfect Information
3.2.1 Theory: Subgame Perfection
3.2.2 Bank Runs
3.2.3 Tariffs and Imperfect International Competition
3.2.4 Tournaments
3.3 Repeated Games
3.3.1 Theory: Two-Stage Repeated Games
3.3.2 Theory: Infinitely Repeated Games
3.3.3 Collusion between Cournot Duopolies
3.3.4 Efficiency Wages
3.4 Dynamic Games of Complete but Imperfect Information
3.4.1 Extensive-Form Representation of Games
3.4.2 Subgame-Perfect Nash Equilibrium

Unit IV: Static and Dynamic Games of Incomplete Information

4.1 Theory: Static Bayesian Games and Bayesian Nash Equilibrium
4.1.1 Normal-Form Representation of Static Bayesian Games
4.1.2 Definitions of Bayesian Nash Equilibrium
4.2 Applications
4.2.1 Mixed Strategies Revisited
4.2.2 An Auction
4.2.3 Double Auction
4.3 The Revelation Principle
4.4 Introduction to Perfect Batesian Equilibrium

4.4.1 Perfect Bayesian Equilibrium in Signaling Games
4.4.2 Job-Market Signaling
4.4.3 Corporate Investment and Capital Structure
4.4.4 Monetary Policy
4.5 Other Applications of Perfect Bayesian Equilibrium
4.5.1 Cheap-Talk Games
4.5.2 Sequential Bargaining under Asymmetric Information
4.5.3 Reputation in the Finitely Repeated Prisoners' Dilemma
4.6 Refinement of Perfect Bayesian Equilibrium

Reading List

Essential Reading

Aliprantis, C. D., & Chakrabarti, S. K. (2000). *Games and decision making* (Vol. 2). New York: Oxford university press.
Dutta, P. K. (1999). *Strategies and games: theory and practice*. MIT press.
Gibbons, R. (1992). *Game theory for applied economists*. Princeton University Press.
Munoz-Garcia, F., Munoz-Garcia, & Toro-Gonzalez, D. (2019). *Strategy and Game Theory*. Springer International Publishing.
Osborne, M. J. (2004). *An introduction to game theory* (Vol. 3, No. 3). New York: Oxford university press.

Additional Reading

A. Dixit, S. Skeath, & D. Reiley (2009). *Games of Strategy*. NY: W.W. Norton & Company.
Harrington, J.E., *Games, Strategies, and Decision Making*, 2nd edition, Worth Publishers: Macmillan Ed., 2015.
McCarty, N.; Meirowitz, Political Game Theory, Cambridge University Press.
Morrow, J. D. Game Theory for Political Scientists, Princeton University Press.
Papayoanou, P. (2010). *Game theory for business: A primer in strategic gaming*. Probabilistic Publishing.
Thomas Ferguson (2018). *Game Theory*. World Scientific.

Date: February 2025

CRD301 Advance skills for Career Development

Module Code and Title:	CRD301 Advance skills for Career Development
Programme:	Bachelor of Economics and political Science, Bachelor of Digital Communication and Project Management, Bachelor of Data Science and Data Analytics
Credit:	12
Module Tutor(s):	Sangay Choden, Tandin Penjor
Module Coordinator:	Tandin Penjor

General 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.

Type	Approach	Hours per week	Total credit hours
Contact	Lectures and discussion	1	**60**
	In-class exercises and group discussion	2	
	Presentations	1	
Independent study	Identifying key career development strategies and techniques.	1.5	**60**
	Preparation for in-class participation (e.g., mock interviews, CV writing, networking exercises)	2	
	Self-study (resume building, research on employability trends)	0.5	
Total		8	**120**

Assessment Approach

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

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.

Assessment Criteria

4 marks	Inclusion of Necessary Sections: *All required sections (e.g., personal details, experience, skills, education) are included.*
3 marks	Adherence to Proper Formatting: *The formatting is consistent throughout, with a clear structure and uniform style.*
3 marks	Incorporation of Relevant Keywords: *Keywords related to the job role or industry are appropriately incorporated into the content.*
2 marks	Highlighting Key Competencies: *Key competencies, such as skills, achievements, and qualifications, are clearly identified.*
3 marks	Tailoring to Specific Job Requirements: *The content is tailored to the specific job description, showing how qualifications align with the employer's needs.*

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.

Assessment Criteria

4 marks	Content Clarity and Relevance: *The content is well-structured and clearly communicated, free of confusion or ambiguity.*
3 marks	Professionalism and Presentation: *The presentation or content maintains a high level of professionalism in language, tone, and behavior.*
4 marks	Creativity and Engagement: *The content or presentation demonstrates originality and innovative thinking.*
4 marks	Technical Quality and Editing: *The content is technically sound, with correct formatting, clear visuals, and high-quality audio or video (if applicable).*

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.

Assessment Criteria

4 marks	Preparation and knowledge: *Demonstrates thorough preparation and understanding of the topic or interview subject.*
5 marks	Interview performance: *Communicates ideas clearly and confidently, with good articulation.*
3 marks	Role in the interview: *Takes an active role in the interview, contributing relevant insights and perspectives.*

2 marks Peer evaluation and feedback: *Provides helpful, constructive feedback to peers.*
6 marks Reflective analysis: *Provides a thorough analysis of personal performance, identifying strengths and areas for improvement.*

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.

Assessment Criteria

5 marks Portfolio content and components: *The content is relevant and aligned with the objectives or purpose of the portfolio.*
4 marks Organization and navigation: *The portfolio is logically organized, with a clear flow of sections.*
4 marks Professionalism and presentation: *The portfolio is visually appealing, with attention to detail in formatting and design.*
4 marks Relevance and value: *The content is relevant to the intended audience or purpose of the portfolio.*
3 marks Engagement and interactivity: *The portfolio includes interactive features (e.g., hyperlinks, multimedia, or embedded tools) to engage the audience.*

e. **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 Report Assessment Criteria

4 marks Case study design and execution: *The case study is well-structured with a clear focus on the problem, analysis, and outcomes.*
5 marks Interview process and insights: *The interview process is well-planned, with clear questions and an organized approach.*
4 marks Data analysis and findings: *The data analysis is thorough, using appropriate techniques and methods.*
4 marks Recommendations for enhancing employability: *The recommendations are practical, actionable, and specifically designed to enhance employability.*
3 marks Presentation and communication: *The presentation is clear, engaging, and easy to follow.*

Case Study Presentation Criteria

4 marks Content and key findings: *Content is directly related to the topic and highlights key findings.*
3 marks Insights and recommendations: *Insights are practical and relevant, with clear, actionable recommendations.*
3 marks Presentation skills: *The presenter communicates effectively, with clear speech, good pacing, and confidence.*

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
(Practical)	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
	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

1.1 kills for personal branding
1.2 Define personal branding
1.3 Identifying the target audience
1.4 Storytelling elements to build a strong personal brand
1.5 Creating a personal brand
1.6 Promoting 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 job.
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 interviews.
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* (6th 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_3fddf67c17a64d098880bb840020557b&userId=-1&userTypeID=34861&UserState=GUEST

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):	Tashi Jamtsho, Tshering Dorji
Module Coordinator:	Tashi Jamtsho

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 propose evidence-based solutions to or interpretations of real-world issues. 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. Ability to integrate and apply theoretical knowledge to practical, real-world problems.
7. Communicate research findings effectively in written and oral formats.
8. Evaluate project outcomes against predefined success criteria.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours
Contact	Proposal Writing	2	**60**
	Mid-term progress review	1	
	Project seminar	1	
Independent study	Data collection and analysis	2	**60**
	Report writing	1	
	Self-directed learning	1	
Total		8	**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: *The project topic is clearly defined and easily understood.*

6 marks Justification, depth of literature review and quality of sources: *A strong rationale is provided for the chosen topic, demonstrating its importance and significance.*

5 marks Data collection process and ethical considerations: *The data collection process is well-defined, using appropriate methods and ensuring reliable results.*

3 marks Clarity, organization, innovation, and formatting: *The project is well-organized, with a logical structure and clear presentation of information.*

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 should include project progress, identify challenges, and set revised plans for successful project completion.

Assessment Criteria

8 marks	Explanation of data collection and preliminary findings: *The data collection methods are clearly described, including sources, techniques, and processes.*
6 marks	Discussion of challenges and solutions: *Key challenges encountered during the project is clearly identified, demonstrating an understanding of obstacles.*
6 marks	Project progress assessment and revised project plan: *A clear evaluation of the project's progress is provided, including completed milestones and tasks.*

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.

Assessment Criteria

20 marks	Comprehensive analysis and well-structured discussion: *Provides a thorough and in-depth analysis of the topic, exploring various perspectives and relevant factors.*
10 marks	Logical conclusions and policy implications: *Draws well-supported, logical conclusions based on the analysis, summarizing key points effectively.*
5 marks	Proper referencing and adherence to academic standards: *All sources are properly cited and referenced according to the appropriate academic style.*
5 marks	Clear formatting and presentation: *The document is visually appealing, with appropriate use of headings, subheadings, and other formatting elements.*

d. Project Seminar (20%)

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.

Assessment Criteria

10 marks	Organized presentation of findings: *The findings are well-organized, with a clear structure that logically progresses from one point to the next.*
5 marks	Clarity, coherence, and conciseness: *The content is easy to understand, with clear and precise language.*
5 marks	Engagement in a question-and-answer session: *The presenter answers questions thoughtfully and directly, demonstrating an understanding of the topic.*

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
Practical	d. Project Proposal	1	20

	e. Mid-term Progress Review (presentation)	1	20
	f. Final Project Report	1	40
	f. Project Seminar	1	20
Total		**100**	

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, social and 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 Delivering a structured oral presentation summarizing key insights.
4.5 Reflecting on project experiences and identifying lessons learned.
4.6 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: February 2025

Year 3, Semester II

CRD303 Professional Certificate (Deep Domain Specialization)

Module Code and Title:	CRD303 Professional Certificate (Deep Domain Specialization)
Programme:	Economics and Political Science
Credit:	12
Module Tutor(s):	Karma Yoezer, Ugyen Lhendup, Thinley Yoezer
Module Coordinator:	Karma Yoezer

General Objective

This module is designed to provide students with the essential knowledge and skills necessary for professional success. It offers two certification pathways: one in Business Analysis Certification, focused on business decision-making and another in Data Analyst in R, centered on data analysis. The module covers industry standards, ethical practices, and practical tools, preparing students to navigate real-world challenges effectively. Both certification tracks are strategically designed to enhance employability and equip students with specialized expertise in their respective fields. Upon completion, students will be well-prepared to pursue advanced career opportunities.

Learning Outcomes

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

1. Understand the business analysis body of knowledge.
2. Apply business analysis skills and techniques.
3. Identify and mitigate risks related to business analysis and project execution.
4. Design business solutions that meet organizational needs.
5. Write and execute R code with ease, even without prior coding experience.
6. Learn data manipulation and transformation.
7. Use descriptive statistics and visualizations to draw initial insights from real-word datasets.
8. Develop critical thinking skills for approaching data analysis tasks, from identifying key questions to presenting actionable insights based on analysis.

Learning and Teaching Approach

This module is designed to ensure that students are thoroughly prepared for the external certification exam. The curriculum will align closely with the official guidelines and exam blueprint

provided by the external certification organization. As part of exam preparation, programme team will help guiding students become familiar with the format, timing, and difficulty level of the exam.

Type	Approach	Hours per week	Total credit hours
Contact	Facilitation and discussion	2	**30**
Independent study	Self-study	6	**90**
Total		8	**120**

Overview of the assessment approaches and weighting
The assessment approaches and weighting for this professional certification module will follow the guidelines set by the certifying external organization. The business analysis certification assesses both knowledge and practical competency through 50 multiple-choice questions in 60 minutes. Similarly, data analyst certification includes a timed exam to test theoretical knowledge and a practical exam to asses students' ability to apply data analysis skills, including solving problems, creating visualizations, and communicating findings effectively.
The college will cover a one-time registration fee and the exam fees for the students upon registration. This one-time payment of fee is to ensure that the prescribed certification requirements are met successfully, and on time. If the students fail the first attempt, they will be held responsible to the achievement of certificate and associated costs – registration, scheduling, exam and test costs.

Pre-requisites: EPS202, EPS204, EPS206, DAT206, DAT207, DAT307

Subject Matter

Business Analysis Certification
1.1. Introduction to business analysis
1.2. Business analysis planning and monitoring
1.3. Elicitation and collaboration
1.4. Strategy analysis
1.5. Requirements analysis and design definition
1.6. Solution evaluation
1.7. Professional skills

Data Analyst in R
2.1. Introduction to data analysis
2.2. Data cleaning and preparation
2.3. Exploratory data analysis
2.4. Data visualization
2.5. Statistical analysis
2.6. Data modelling
2.7. Report and communication

Reading List

Essential Reading

Your Guide to Data Science Certifications in 2024 | Coursera. https://www.coursera.org/in/articles/data-science-certification
DataCamp. (n.d.). *Data Analyst Associate certification*. DataCamp. https://support.datacamp.com/hc/en-us/articles/7926305856919-Data-Analyst-Associate
International Institute of Business Analysis (IIBA). (n.d.). *4 simple steps to business analysis certification*. IIBA. https://www.iiba.org/business-analysis-certifications/4-simple-steps-to-business-analysis-certification/
DataCamp. (n.d.). *Data Analyst certification*. DataCamp. https://support.datacamp.com/hc/en-us/articles/7635051866903-Data-Analyst#h_01HEBHV1R9GJ8JDJ279MA04VAB

Date: February 2025

CRD304 Deep Experiential: Capstone Project

Module Code and Title:	CRD304 Deep Experiential: Capstone Project
Programme:	Economics and Political Science
Credit:	12
Module Tutor(s):	Karma Yoezer, Ugyen Lhendup
Module Coordinator:	Karma Yoezer

General Objective

This is a practical, industry-focused module that blends academic learning with real-world application. It aims to integrate economic theory, optimization techniques, and data analytics to address real-world business challenges. Students will collaborate with industry partners to solve problems related to pricing strategy, cost optimization, resource allocation, market analysis, and strategic decision-making, applying principles from microeconomics, game theory, econometrics, and optimization models. The module aims to enhance students' ability to make data-driven decisions that improve business performance and sustainability. It fosters the development of critical thinking, problem-solving, and communication skills while emphasizing teamwork and professional collaboration. By the end of the semester, students will demonstrate the ability to design and implement innovative solutions that address tangible business needs and contribute to organizational success.

Learning Outcomes

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

1. Analyze and apply economic theories.
2. Design and conduct independent research.
3. Develop critical thinking and problem-solving skills.
4. Present complex economic analysis and recommendations.
5. Collaborate with industry experts and stakeholders.
6. Develop a deeper understanding of the economic challenges specific to the industry.
7. Enhance project management skills.
8. Build professional networking and industry connections.

Learning and Teaching Approach

Type	Approach	Hours per week	Total credit hours

Contact	Facilitation and discussion	1	**60**
	Industry partner engagement	1	
	In-class exercises and workshops	0.5	
	Group work and collaboration	0.5	
	Presentations and feedback sessions	1	
Independent study	Research and analysis	1.5	**60**
	Report writing and drafting	1.5	
	Self-study and data analysis	1	
Total		8	**120**

Assessment Approach

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

a. Project proposal (25%)

Students in a group of 4-5 has to develop a clear research question, outline their methodology, identify relevant data sources, and develop a feasible timeline for their project. The proposal must align with industry needs and academic objectives. The project proposal must be approved by both the industry mentor and academic supervisor.

The project proposal will be assessed out of 25 marks. Learning outcomes 1,2,3, and 5 will be assess by this assessment.

Project Proposal Assessment Criteria

4 marks	Clarity and relevance of research question: *The research question is precisely worded, without ambiguity, and clearly communicates the focus of the study.*
6 marks	Methodology and analytical approach: *The methodology is clearly described, detailing the approach and reasoning behind the choice.*
4 marks	Plan: *Data sources and collection plan are well planned*
4 marks	Timeline and project plan: *The timeline is achievable, with tasks allocated reasonable timeframes and milestones set at appropriate intervals.*
7 marks	Alignment with industry and academic goals: *The project clearly addresses relevant academic theories, concepts, or research gaps.*

b. Mid-term report (20%)

Each group has to make a 20-minute presentation on a chosen project proposal. Students are expected to present an overview of their research question, methodology, and the data collection. The students will include in their presentation detailed analysis of the preliminary data, outline any initial findings, and reflect on the effectiveness of the chosen methodology. This assessment will assess learning outcomes 1,2,3,4, and 5.

The mid-term report will be assessed out of 20 marks based on the following criteria.

Presentation Assessment Criteria

3 marks	Introduction and project overview: *The introduction clearly defines the project's objectives and scope.*
3 marks	Preliminary data analysis*: The data is accurately analyzed with appropriate methods.*

5 marks Outline of findings: *Findings are directly related to the research question.*
5 marks Methodological reflection: *Reflects on the chosen methodology weakness and strengths.*
4 marks Project progress and timeline: *The project is progressing according to the planned timeline with key milestones met.*

c. Final report (35%)

Each group will present a comprehensive, in-depth research documents that presents the complete findings of the capstone project. It should clearly outline the economic analysis, conclusions, and actionable recommendations derived from the research, addressing the industry-specific economic challenges identified at the start of the project. Students are expected to demonstrate their academic rigor through the application of economic theories, quantitative methods, and critical analysis, while also showcasing practical relevance by offering solutions directly applicable to industry issues. This assignment will assess learning outcomes 1,2,3,4, and 5.

Essay Assessment Criteria

7 marks Economic analysis: *Provides a thorough analysis of the economic factors, supported by relevant data and models.*
5 marks Conclusions: *Effectively summarizes key findings and insights from the analysis.*
6 marks Actionable recommendations: *Recommendations are realistic, feasible, and relevant to the problem at hand.*
4 marks Academic rigor: *The work is grounded in relevant academic theory and concepts.*
8 marks Industry relevance: *The findings and recommendations are directly applicable to current industry practices or challenges.*
5 marks Structure and presentation: *The presentation is well-structured, with logical flow and easy-to-follow sections.*

d. Final presentation (20%)

Each group will make a professional presentation to both academic and industry panels. Students are required to demonstrate their ability to effectively communicate complex economic concepts. Students are expected to showcase their understanding of economic principles while using straightforward language, visual aids, and relatable examples to bridge the gap between theory and real-world applications. Learning outcomes 1,2,3, and 4 will be assessed by this assignment.

Final Presentations Assessment Criteria

4 marks Clarity of communication: *Ideas are conveyed clearly, without jargon or confusion*
4 marks Engagement and delivery: *The presenter maintains a strong connection with the audience, using clear speech and appropriate pacing.*
5 marks Understanding and application of economic concepts: *Demonstrates a solid grasp of relevant economic theories and principles.*
4 marks Professionalism and confidence: *Presents confidently, with a calm and authoritative manner.*
3 marks Use of visual aids: *Visual aids (e.g., slides, graphs) are relevant, clear, and effectively support the presentation.*

Overview of the assessment approaches and weighting

Continuous assessment	Areas of assessment	Quantity	Weighting (%)
A (Theory)	a. Project proposal	1	25
	b. Mid-term report	1	20
B (Practical)	b. Final Report	1	35
	b. Final presentation	1	20
Total		**100**	

Pre-requisites: EPS202, EPS204, EPS301, DAT206, DAT207, DAT307

Subject Matter

Unit I: Introduction to Applied Economics

1.1. Role of applied economics in industry
1.2. Key economic challenges in businesses and organizations
1.3. Benefits of integrating academic learning with industry applications

Unit II: Industry Challenges and Problem Identification

2.1. Defining the problem
  2.1.1 Market analysis
  2.1.2 Forecasting
  2.1.3 Policy evaluation
  2.1.4 Financial assessments
2.2 Aligning academic theory with practical industry challenges
2.3 Setting clear objectives and measurable outcomes for the project

Unit III: Research Methodology and Data Collection

3.1. Designing research questions and hypotheses
3.2. Qualitative and quantitative data collection methods
3.3. Assessing the validity and reliability of data
3.4. Addressing ethical concerns in industry collaborations

Unit IV: Economic Modeling and Data Analysis

4.1. Introduction to economic modeling and statistical techniques
4.2. Advanced techniques in market analysis, forecasting, and policy evaluation
4.3. Interpreting and presenting economic findings effectively

Unit V: Final Report and Presentation

5.1. Writing a structured report with clear economic analysis, conclusions, and recommendations
5.2. Professional presentation techniques for industry audiences
5.3. Incorporating feedback from mentors into the final deliverables.
5.4. Effective communication in presenting complex economic analysis
5.5. Discussing how recommendations will be implemented in the industry context.

Reading List

Essential Reading

Coursera Staff. (2024, September 26). *Understanding the capstone project*. Coursera. https://www.coursera.org/articles/capstone-project

Swinburne University of Technology. (n.d.). *Design Bureau: Collaboration & partnerships - Student projects*. Swinburne University of Technology. Retrieved February 24, 2025,

from https://www.swinburne.edu.au/collaboration-partnerships/student-projects/design-bureau/

Additional Reading

SolidEssay. (n.d.). *Capstone project: Essential capstone project guidelines for students*. SolidEssay. Retrieved February 24, 2025, from https://www.solidessay.com/our-services/capstone-project-essential-capstone-project-guidelines-for-students

Date: February 2025