

Old Wine in a New Bottle: Reflections on the Undergraduate Research modules offered in RUB Colleges

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Abstract

This paper will compare the research modules with different module codes and titles offered in different programmes by eight constituent and two affiliate colleges of Royal University of Bhutan. The objective of this study is to review the different modules and find out the similarities and differences in the general objectives, assignments and subject matter. The findings will be used to explore the opportunities of offering one university-wide research module.

Background: A glimpse of the research modules

The Royal University of Bhutan has 10 constituents, including Yonphula Centenary College, and two affiliate colleges spread across different campuses (www.rub.edu.bt/index.php/en/). Of the 12 colleges, eight constituent colleges and two affiliate colleges offer undergraduate programmes except Samtse College of Education (www.sce.edu.bt) and Yonphula Centenary College. (www.ycc.edu.bt).

Sherubtse College offers *RSM301 Research Methods* for BSc in Mathematics, BSc in Statistics, BSc in Data Science, BSc in Chemistry, BSc in Physics, BSc in Environmental Science, BSc in Life Science, BA in Population and Development Studies, BA in Economics, BA in Political Science and Sociology, BSc in Geography, BA in Media Studies and BA English programmes. It offers a different research module *HSM303 Methodology of Historical Research* in BA in History programme (www.sherubtse.edu.bt).

Paro College of Education (PCE) offers *RES301 Introduction to Action Research* in Bachelor of Education (Primary) programme (www.pce.edu.bt).

At the College of Science and Technology (CST), *PRW 301 Introduction to Research* is offered in BE in Civil Engineering, BE in Electrical Engineering, BE in Engineering Geology, BE in Instrumentation and Control Engineering, BE in Electronics and Communication Engineering and BE in Information Technology programmes. It offers *PRW301 Introduction to Research* as a college-wide research module for all the programmes with research (www.cst.edu.bt).

College of Natural Resources (CNR) has three research modules which are *RES301 Research Methods*, *RES201 Research Methods* and *RES202 Research Methods*. *RES301 Research Methods* is offered in BSc in Agriculture, BSc in Animal Science, BSc in Forestry and BSc in Environment and Climate Studies programmes while *RES201 Research Methods* is offered in BSc in Sustainable Development and *RES202 Research Methods* in BSc in Food Science and Technology programmes

(www.cnr.edu.bt).

College of Language and Culture Studies (CLCS) offers *RES101 Basic Research Methods in BA in Bhutanese and Himalayan Studies* which is discontinued and in BA in Language and Literature programmes. The college offers a different research module *RES303* ལྟན་བཟང་ ཞིབ་འཇུག་ཐབས་ལམ། (Basic Research Methods) in BA in Dzongkha and Culture Studies programme (www.clcs.edu.bt).

At Royal Thimphu College (RTC), *UGR202 Anthropological Research Methods* is offered in BA in Anthropology, *UGR304 Research Methodology* in BSc in Environmental Management and BA in Development Economics programmes. RTC also offers *RES301 Research Methods in Business* in BCom and BBA programmes borrowed from GCBS and *RSM301 Research Methods* in BA in Political Science and Sociology borrowed from Sherubtse College (www.rtc.bt).

Jigme Namgyel Engineering College (JNEC) has two research programmes. *PRW303 Research Methodology* is offered in BE in Mechanical Engineering and *PRW302 Basic Research Method and Seminar* in BE in Surveying & Geoinformatics and BE in Power Engineering programmes (www.jnec.edu.bt).

Gyalpozhing College of Information Technology (GCIT) offers *PRW301 Introduction to Research* for BSc in Computer Science and BSc in IT programmes. This module is borrowed from BE in Civil Engineering of CST (www.gcit.edu.bt).

Gedu College of Business Studies (GCBS) offers *RES301 Research Methods in Business* in BCom and BBA programmes (www.gCBS.edu.bt).

At Norbuling Rigter College (NRC), *REM101 Research Methods* is offered in BA in Development Studies and *RSM 309* ཞིབ་འཇུག་ཐབས་ལམ། (research methods) in BA in Dzongkha and English programmes. NRC also offers *RES301 Research Methods* in BCom and BBA programmes borrowed from GCBS and *RSM301 Research Methods* in BA in Political Science and Sociology and BA in English programmes borrowed from Sherubtse College (www.nrc.edu.bt).

The objective of this study is to review these different research modules offered in different undergraduate programmes and in different colleges to understand their similarities and differences. This study will also explore the opportunities to offer one University-wide research module grounded in practices in different colleges and findings from the comparison of different research modules.

Similarities and differences: A peek inside the Research Modules

This paper will compare the research modules with different codes and titles offered in different undergraduate programmes¹ by eight constituent and two affiliate colleges. Comparison of general objectives, learning outcomes, assignments and subject matter of the research modules will be done to gather a rounded understanding of the similarities and differences of the research modules.

¹ Research modules of Post Graduate, Postgraduate Diploma and Diploma programmes are excluded because the level of award is different. Further, the module on undergraduate research projects is beyond the scope of this paper.

General objectives²

The comparison of the general objectives of the research modules show very close similarities except for the use of different expressions and terminologies to describe the general teaching intentions and coverage of a module (s). For instance, the highlight of the general objective of *RSM301 Research Methods* offered in thirteen different programmes at Sherubtse College is to ‘introduce students to basic research methods’(Sherubtse College, 2021, pp.77-84). Similarly, the highlight of the general objective of *PRW301 Introduction to Research* offered in four programmes at CST is to ‘provide students with an understanding of research principles, a range of research methodologies and appropriate analysis tools’(CST, 2020, pp.99-103). Further, the essence of the general objective of *RES301 Research Methods* of CNR offered in four programmes is to ‘equip students with necessary knowledge and skills of research methods’ (CNR, 2015, pp. 99 -101). Likewise, the general objective of *RES201 Research methods* (CNR, 2017, pp.43 -49). and *RES202 Research methods* (CNR, 2017, pp. 150-160) of CNR are also the same as it aims to ‘equip students with necessary knowledge and skills of research methods’.

RES101 Basic Research Methods offered in BA in Bhutanese and Himalayan Studies and BA in Language and Literature at CLCS aims to ‘familiarize students with interdisciplinary and cross-cultural approaches to research in humanities’ (CLCS, 2018, p p.43 -49). Similarly, *RES303* ལྷིར་བཏང་ཞིབ་འཚོམ་ཐབས་ལམ། (Basic Research Methods) offered in BA in Dzongkha and Culture Studies programme aims to ‘introduce to humanities research methods’ (CLCS,2021, p p.150-160).

The general objective of the *PRW303 Research Methodology* offered in BE in Mechanical Engineering is to ‘make students understand the importance of research in Analysing engineering problems and identifying solution...’ and ‘...cover different steps of research methodology and appropriate data analysis tools’ (JNEC, 2019, pp. 139 - 42).

RES301 Research Methods in Business offered at GCBS for BBA and BCom undergraduate students aims to ‘acquaint students with the process to identify research problems, draw and operationalise research plans, apply appropriate techniques for empirical investigation and write a research report...’ and also to familiarize ‘students with various dimensions and methods of research which will help them make informed choices while doing a research’ (GCBS, 2021, pp. 108 – 111).

The research module *UGR201 Research Methodology* offered in BSc in Environmental Management and BA in Development Economics at RTC aims to ‘provide students with a working understanding of research principles and a range of research methods and techniques’ (RTC, 2021, pp. 122-125).

The general objective of *REM101 Research Methods* offered in BA in Development Studies at NRC is to ‘introduce the students to the fundamental concepts and applications of research methods’ (NRC, 2020, pp. 27-30). Further, the ‘*RSM 309* ཞིབ་འཚོམ་ཐབས་ལམ།’ offered in BA in Dzongkha and English aims to ‘སློབ་ཞིབ་འཚོམ་གྱི་གཞི་རྒྱ་ལམ་ལོན་དང་རིག་ཆུལ་རྒྱུད་ཐབས་ལུ་མེན། (provide knowledge and skills of research)’ (NRC, 2019, pp. 98-101).

² Refer to Annexure One

RES202 Research Methods offered in BSc in Animal Science at CNR aims to 'equip students with necessary knowledge and skills of research methods' (CNR, 2017, pp. 43 -49). Similarly, *RES201 Research Methods* offered in BSc in Sustainable Development aims to equip 'students with necessary knowledge and skills of research methods'(CNR, 2017, pp. 150-160). *Research Methods RES301* offered in four different programmes (BSc in Agriculture, BSc in Forestry, BSc in Food Science and Technology (Diploma nested) and BSc in Environment and Climate Studies aims to 'equip 'students with necessary knowledge and skills of research methods'(CNR,2015, pp. 99 -101).

At GCIT, BSc in Computer Science and BSc in IT programmes offers '*PRW301 Introduction to Research*' which is borrowed from BE in Civil Engineering of CST.

The research modules with different general objectives are *UGR202 Anthropological Research Methods* offered in BA in Anthropology programme at RTC, *HSM303 Methodology of Historical Research* offered in BA in History programme at Sherubtse College, *RES301 Introduction to Action Research* offered in BEd (Primary) programme at PCE and *PRW302 Basic Research Method and Seminar* offered in BE in Surveying & Geoinformatics programme at JNEC. The general objective of *UGR202 Anthropological Research Methods* is to provide 'Basic principles of research design, data collection methods and data analysis from an anthropological perspective' (RTC, 2018, pp. 60-63) while that of *HSM303 Methodology of Historical Research* is to 'focus on the philosophical and the methodological issues pertaining to historical research and writing history by providing selected historical themes' (Sherubtse College, 2020, pp. 52-54) and that of *RES301 Introduction to Action Research* is to introduce 'students to the concepts, processes, and procedures of action research' (PCE, 2020, p.147-152). *PRW302 Basic Research Method and Seminar* aims to 'introduce and orient students towards basic research in engineering' (JNEC, 2021, pp. 145 to 147).

Learning Outcomes³

Superficially, all the learning outcomes appear different. However, all the learning outcomes focus on two elements which are knowledge on research methods and its application.

The learning outcomes associated with knowledge broadly revolves around deliberating on quantitative and qualitative research methods, literature review, research design, sampling, data collection and data analysis. The application part of the learning outcomes focuses mainly on conducting literature review, applying research ethics, developing research design and proposal, collecting data, applying appropriate data analysis methods and writing research reports. The research modules *RES201 Research Methods* of CNR, *UGR304 Research Methodology* of RTC and *RSM309* ཞིབ་འཇུག་གསལ་ལ of NRC also require students to present their research findings.

While most of the learning outcomes of fourteen out of the sixteen modules are the same, it is important to note a few different learning outcomes that feature in some of the research methods modules. The *RSM301 Research Methods* of Sherubtse has an outcome which expects the students to be able to 'use reference manager tool in

³ Since the matrix which displays the similarities and differences of the learning outcomes of the sixteen research methods modules is several pages, it is not provided as annexure.

research process'. The PRW302 Basic Research Method and Seminar of JENEC has two learning outcomes that do not appear in other modules. They are 'develop skills to work in groups or independently' and 'develop presentation skill and disseminate research skills in engineering problems.' The PRW303 Research Methodology of JENEC also has a different learning outcome which is 'deduce and critique the research data'. Similarly, the RES201 Research Methods of CNR has two different learning outcomes which are 'design sampling and understand statistics associated with sampling' and 'explain and design basic experimental research'. RES301 Introduction to Action Research of PCE has ten outcomes. Of the ten learning outcomes, four focus on action research and are therefore different. They are 'explain the features and importance of action research;' 'explain the general steps and procedures in conducting action research', 'identify action research topics and develop appropriate research questions', and 'develop action research tools relevant to the topic.' UGR304 Research Methodology of RTC also has two specific learning outcomes which are 'assess the internal and external validity in a research design' and 'explore current research within a specialist research area drawing on appropriate theoretical perspectives'. 'Develop a theoretical framework of research' and 'create an annotated bibliography of at least three different sources in APA format' are two different learning outcomes specific to RES101 Basic Research Methods of CLCS. RES301 Research Methods in Business of GCBS also has three learning outcomes specific to the programme. They are 'explain the differences between business research methodology and research methods', 'make informed choice from the alternative methods' and 'designs of business research and Interpret and analyze the data using statistical tools'.

These different learning outcomes can be aligned with ease to suit the requirement of other programmes as they are directly linked to the subject matter of other research methods modules.

As discussed in the general objectives, the learning outcomes of HSM303 Methodology of Historical Research offered to BA in History at Sherubtse College and UGR202 Anthropological Research Methods offered to BA in Anthropology at RTC are different from other research methods modules.

Assignment⁴

Most of the research modules have similar assessments. Broadly, there is a continuous assessment component where students are required to write an assignment on different areas such as writing research proposals, formulating research problems, literature review, questionnaire design, sampling, data collection methods and data analysis. Some modules require students to present their assignment and write a research report. Some even entail students to carry out a mini-project or practical. The essence of assignments of almost all the research modules is to take students through the different phases of writing a research paper. Some research modules also have semester-end examinations.

On the contrary, *UGR202 Anthropological Research Methods* offered in BA in Anthropology has different assignments. It demands the student to engage in Life history interviews and conduct an Oral History documentation and Archival Research Project. Similarly, the focus of the assignment of *RES301 Introduction to Action*

⁴ Refer to Annexure Two

Research offered in BEd (Primary) is on writing Action Research proposal, and defending the Action Research proposal.

Subject Matter⁵

Sixteen research modules with different codes and titles are offered in eight constituent colleges and two affiliate colleges of RUB as presented below:

Table 1.

List of research modules offered in RUB Colleges

College	Module Code and title
Sherubtse College	• RSM301 Research Methods
	• HSM303 Methodology of Historical Research
CST	• PRW301 Introduction to Research
JNEC	• PRW303 Research Methodology
	• PRW302 Basic Research Method and Seminar
CNR	• RES301 Research Methods
	• RES202 Research Methods
	• RES201 Research Methods
PCE	• RES301 Introduction to Action Research
RTC	• UGR202 Anthropological Research Methods
	• UGR304 Research Methodology
CLCS	• RES101 Basic Research Methods
	• RES303 རྒྱུ་བཀུ་ཞིབ་འཇུག་ཐབས་ལམ།
GCBS	• RES301 Research Methods in Business
NRC	• REM101 Research Methods
	• RSM309 ཞིབ་འཇུག་ཐབས་ལམ།

The module codes and titles are different. However, the analysis of the subject matter shows that there are more similarities than differences between these modules when the subject matter is compared.

Despite different codes and titles, most of the research modules focuses on areas such as introduction to research, significance of research, types of research, difference between research method and methodology, research process, identifying and formulating research problem and research questions, literature review, research design and variables, research instruments, data collection methods, measurement and sampling, data analysis, ethics, referencing and writing report and publication. *PRW303 Research Methodology* of JNEC, *RES301 Research Methods* of CNR, *RES301 Introduction to Action Research* of PCE, and *PRW301 Introduction to Research* of CST goes on to discuss 'writing research proposal'. *RES101 Basic Research Methods* offered at CLCS even introduces data analysis software.

On the contrary, *RES301 Introduction to Action Research* offered to BEd Primary at PCE is different as it has two Action Research units. They are 'Introduction to Action Research and Action Research Proposal'. However, of the 10 units, eight units are similar to other research modules and offered in different programmes of other colleges (PCE, 2020, pp.147-152). *PRW303 Research Methodology* offered to BE in Mechanical Engineering at JNEC has a unit that introduces Design of Experiments.

⁵ Refer to Annexure Three

However, of the 6 units, this is the only unit which is different and can be elaborated by the module tutor in data collection methods (JNEC, 2019, pp.139-142). *UGR202 Anthropological Research Methods* offered in BA in Anthropology at RTC has seven units of which only two units, which are 'research design and communicating findings' are similar to other research modules. It covers distinct aspects such as 'Research Ethics and Power in Anthropology', Interviews (Spradly, Seidman), Oral History, Archival Research and Overview of other methods used by anthropologists' (RTC, 2018, pp. 60-63). Another research module with different subject matter is *HSM303 Methodology of Historical Research* offered in BA in History programme at Sherubtse College. The module has five units of which only one unit which is Qualitative and Quantitative methods is similar to other research modules. The subject matter of this module focuses on 'Usefulness and value of Historical research (philosophy of history in brief), a historical background of historical writing approaches (on selected ancient historical themes), procedural approaches to Reconstruction of Past and Historical Research Methodology' (Sherubtse College, 2020, pp. 52-54).

Conclusion

Premised on the detailed comparison of the general objectives, learning outcomes, assignments and subject matter of the research modules offered in different programmes across the campuses of eight constituent and two affiliate colleges, the findings show that, with the exception of a few, the general objectives, learning outcomes, assignment and subject matter of majority of the research methods modules aligns well with one another.

Of the sixteen research methods modules with different codes and titles, only three are different from others as these modules have distinct general objectives and subject matter. They are *HSM303 Methodology of Historical Research* offered in BA in History programme at Sherubtse College, *RES301 Introduction to Action Research* offered in BEd (Primary) programme at Paro College of Education and *UGR202 Anthropological Research Methods* offered in BA in Anthropology programme at Royal Thimphu College.

The similarities of general objectives, learning outcomes, assignments and subject matter, more than nuances, of the majority of the research modules provide opportunities to adopt one university-wide research module but allowing justified exceptions.

The findings also show that it is possible to offer the same research methods module to different programmes. This is demonstrated well by the case of *RSM301 Research Methods* of Sherubtse College which is offered to thirteen different programmes ranging from Maths and Physics to Economics and English. Further, *PRW301 Introduction to Research*, is not only offered as a college-wide research module but it is also offered at Gyalpozhing College of Information Technology in BSc in Computer Science and BSc in IT programmes. College of Natural Resources also offers *RES301 Research Methods* to four different programmes.

The findings of the comparison of research modules offered in different programmes show more similarities than differences and the subject matter deals mainly with basic research methods.

The comparison of research modules offered in different programmes show two key

conclusions. The first conclusion points that there are more similarities than differences and the subject matter deals mainly with basic research methods. The comparison also shows that with the exception of two research modules, the general objective, learning outcomes, assignment and subject matter of other research modules align well with one another despite having different module codes and titles. The second important finding, which is grounded in the first conclusion, is that it is possible to offer one research methods module to different programmes.

These two conclusions offer the Royal University of Bhutan with the opportunity to bring the colleges together and design one research module to be offered as a University-wide module with justified exception for few programmes. The orientation and contextualization of specific requirements in different programmes can be comfortably built in during delivery of the subject matter. The undergraduate research project module also offers this opportunity.

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>>>Annexure One: Matrix of college, programme, module code and titles and general objective of different research modules

College	Programme	Module Code and title	General Objective
Sherubtse	<ol style="list-style-type: none"> 1. BSc in Mathematics 2. BSc in Statistics 3. BSc in Chemistry 4. BSc in Physics 5. BSc in Environmental Science 6. BSc in Life Science 7. BA in Population and Development Studies 8. BA in Economics 9. BA in Political Science and Sociology 10. BA in English 11. BSc in Geography 12. BSc in Data Science 13. BA in Media Studies 	RSM301 Research Methods	This module will introduce students to basic research methods. It will provide an overview of quantitative and qualitative research methods. The module will teach design issues, finding and assessing research papers. It will provide skills and understanding of research process to write the research proposal.
	BA in History	HSM303 Methodology of Historical Research	This module will focus on the philosophical and the methodological issues pertaining to historical research and writing history by providing selected historical themes. This will develop research and writing skills appropriate to graduate students of history. This module will also explore issues about historical discovery, assessment and treatment of primary and secondary sources in historical research. Further this module will make students familiar with the basic methods of modern historical research.
CST	<ol style="list-style-type: none"> 1. BE in Civil Engineering 2. BE in Electrical Engineering 3. BE in Engineering Geology 4. BE in Instrumentation and Control Engineering 5. BE in Information Technology 6. BE in Electronics and Communication 	PRW301 Introduction to Research	This module aims to provide students with an understanding of research principles, a range of research methodologies and appropriate analysis tools. It will also develop in the students the skills and knowledge necessary to undertake an independent project. Students will take up a small scale research project that will enable them to go through the whole

	Engineering		research process to better understand the theory learned and to equip them with the practical skills and knowledge required to undertake their project work in a later semester of the programme.
JNEC	BE in Mechanical Engineering	PRW303 Research Methodology	This module will enable student to understand the importance of research in Analysing engineering problems and identifying solutions. The module will cover different steps of research methodology and appropriate data analysis tools. Students will write research proposal that will enable them to go through the whole steps of research methodology. The module will also equip students with required practical skills and knowledge to carry out project work in later semester.
	1. BE in Surveying & Geoinformatics 2. BE in Power Engineering	PRW302 Basic Research Method and Seminar	This module will introduce and orient students towards basic research in engineering so as to identifying engineering problem and devising methods to address it. It will enable the students to introduce the concept of research and innovation aspects so as to well prepare for taking up the major project work and other scholarly activities. Also, it will develop interpersonal communication skills and managerial skills when student identify, plan and execute the problems and do needful presentation.
CNR	1. BSc in Agriculture 2. BSc in Forestry 3. BSc in Environment and Climate Studies 4. BSc in Animal Science	RES301 Research Methods	This module equips students with necessary knowledge and skills of research methods needed in carrying out case studies, experiments and social surveys and write technical reports. It includes the concepts of research, data collection procedures, case studies and survey methods, research designs, experimental research designs, and scientific writing.
	BSc in Sustainable Development	RES201 Research Methods	This module equips students with necessary knowledge and skills of research methods needed in carrying out case studies,

			experiments and social surveys and write technical reports. It includes the fundamental concept of research, data collection procedures, case studies and survey methods, research designs, experimental research designs, and scientific writing.
	BSc in Food Science and Technology (nested)	RES202 Research Methods	This module equips students with necessary knowledge and skills of research methods needed in carrying out social surveys, case studies, and experiments, and write technical reports. It includes the fundamental concept of research, data collection procedures, case studies, survey methods, research designs, and scientific writing.
PCE	Bachelor of Education (Primary)	RES301 Introduction to Action Research	This module introduces students to the concepts, processes, and procedures of action research. The module covers the whole process of action research from identifying an appropriate educational issue to research and writing a research problem statement and research objectives, framing clear and specific action research question(s), writing a critical review of literature; and research methodology including developing data collection tools, data analysis procedures, and finally writing a complete action research proposal. Students shall also be introduced to the importance of ethics in research, particularly in the context of educational research. There is a probability that the final AR proposal students come up may be used as a proposal for the AR project in the following semester. The scope of the module is limited to the conduct of educational action research.
RTC	BA in Anthropology	UGR202 Anthropological Research Methods	This research skills oriented module aims to teach students the basic principles of research design, data collection methods and data analysis from an anthropological perspective. Students will have the opportunity to practice and master the most significant anthropological data collection methods. They will be expected to collect and analyse

			primary data during the course of the module. This module will compliment what students are learning in ETY202 Writing Ethnography as well as help prepare students to undertake UGR303 Undergraduate Ethnographic Research Project in their final year.
	<ul style="list-style-type: none"> BSc in Environmental Management BA in Development Economics 	UGR304 Research Methodology	The module aims to enable students to engage in a focused and sustained piece of research and to apply the theoretical knowledge and skills developed in prior modules to the research process for the production of a written project report.
CLCS	<ul style="list-style-type: none"> BA in Bhutanese and Himalayan Studies (No new intake) BA in Language and Literature 	RES101 Basic Research Methods	The module aims to familiarize students with interdisciplinary and cross cultural approaches to research in humanities. It aims to build a comprehensive understanding of research in humanities and equip students with the necessary research knowledge and skills through hands-on practice.
	BA in Dzongkha and Culture Studies	RES303 ^{ལྟུང་པ་} བཀྲ་ཤིས་འཛེལ་ཐབས་ ལམ།	^{ལྟུང་པ་} ཐོབ་ཚན་འདི་ ལྷོ་བཟུང་གི་ལམ་ མི་རིགས་དང་འབྲེལ་བའི་ ཞིབ་འཚུལ་ ཐབས་ལམ་གྱི་ ཞུགས་དང་རིག་སྟོན་ཐབས་ལམ་ མཉམ་ གཏུགས་ མི་ རིགས་དང་འབྲེལ་བའི་ཞིབ་འཚུལ་གྱི་ རྒྱུ་རྐྱེན་དང་ལག་ལེན་གཉིས་ མཉམ་འབྲེལ་གྱི་རྒྱལ་ལུ་སྐབས་དང་འབད་ རི་དང་། འདི་ལུ་བརྟེན་ ལྷོ་བཟུང་གི་ ལམ་ ཞིབ་འཚུལ་གྱི་གནད་རྒྱུ་རྐྱེན་ འབྲེལ་བཞེད་འབད་ཚུགས་མ་ཚད་ མ་ལྷོད་ས་ལུ་ ཞིབ་འཚུལ་གྱི་གོ་སྐབས་འཚར་བརྒྱ་མི་དང་ རང་རྒྱུ་གི་ཞིབ་ འཚུལ་ལུ་འགོ་འདྲན་འཐབ་ཚུགས་ནི་ལུ་རྒྱུ་ལུ་མིན།
GCBS	BBA/BCom	RES301 Research Methods in Business	This module aims to acquaint students with the process to identify research problems, draw and operationalize research plans, apply appropriate techniques for empirical investigation and write a research report. The module also familiarizes students with various dimensions and methods of research which will help them make informed choices while doing a research. Students will also be introduced to languages of research, ethical principles and challenges in conducting a research, and thus, serves as a foundational module for practical research in the advanced levels of study.
NRC	BA in Development Studies	REM101 Research Methods	The module will introduce the students to the fundamental concepts and applications of

			research methods. They will learn the method of data collection, sampling technique and how to prepare a research proposal. Students will be prepared to apply the research knowledge and skills in their professional life.
	BA in Dzongkha and English	RSM309 ཞིབ་འཇུག་ཐབས་ལམ	ཕྱི་རྒྱུ་ཚན་འདྲེ་གིས་ སློབ་ཕྱག་ཚུ་ལུ་ཞིབ་འཇུག་གྱི་ལཱ་ཞུ་རྟེན་གྱི་ཤེས་ཡོན་ དང་རིག་ཚུ་ཕྱོད་ཐབས་ལུ་ཨོན། དེ་ལུ་བརྟེན་ཏེ་ སློབ་ཕྱག་ཚུ་གིས་ ཤེས་ ཡོན་དང་རིག་ཚུ་ལག་ལེན་འཐབ་སྟེ་ རྗོང་ཁའི་ནང་ ཞིབ་འཇུག་ཚུ་ལ་ མཐུན་འབད་དེ་ ཤེས་ཡོན་ རྒྱ་བསྐྱེད་གཏང་ཚུ་གས་ཚེ་འདྲེ་དོན་ལུ་ཨོན།

>>>Annexure Two: Matrix of college, programme, module code and titles and assignment of different research modules

College	Programme	Module Code and title	Assignment
Sherubtse	<ol style="list-style-type: none"> 1. BSc in Mathematics 2. BSc in Statistics 3. BSc in Chemistry 4. BSc in Physics 5. BSc in Environmental Science 6. BSc in Life Science 7. BA in Population and Development Studies 8. BA in Economics 9. BA Political Science and Sociology 10. BA in English 11. BSc in Geography 12. BA in Data Science 13. BA in Media Studies 	RSM301 Research Methods	<ol style="list-style-type: none"> 1. Research Article Review 2. Literature Review 3. Research Proposal Assignment 4. Semester-end Examination
	BA in History	HSM303 Methodology of Historical Research	<ol style="list-style-type: none"> 1. Assignment 1: Annotated bibliography on a selected historical theme 2. Assignment 2 : Historiographical essay on a selected historical theme 3. Assignment 3 : Essay on a selected historical theme 4. Assignment 4: Presentation of the Assignment 3 5. Semester-end Examination
CST	<ol style="list-style-type: none"> 1. BE in Civil Engineering 2. BE in Electrical Engineering 3. BE in Engineering Geology 4. BE in Instrumentation and Control Engineering 5. BE in Information Technology 6. BE in Electronics and 	PRW301 Introduction to Research	<ol style="list-style-type: none"> 1. Scientific Research Report and presentation of Research findings (This assignment takes the students through the process from identification of research topic to presentation of research findings) 2. Continuous assessment by guide where students present the following on a weekly basis (i) Introduction, (ii)

	Communication Engineering		Problem statement with aim and objectives, (iii) methods, (iv) literature review, (v) results, (vi) discussion with conclusions.
JNEC	BE Mechanical Engineering	PRW303 Research Methodology	<ol style="list-style-type: none"> 1. Identification of research problem, developed research objectives, conducted literature reviews, methodology used, analyzed the data, obtained result and drawn conclusion of a peer reviewed mechanical engineering related paper and identifying a research topic, writing a research problem, develop research objectives, conduct literature reviews, and preparation of research proposal 2. Seminar Paper Presentation 3. Proposal (presentation, writing proposal and final proposal presentation)
	<ol style="list-style-type: none"> 1. Bachelor of Engineering in Surveying & Geoinformatics 2. BE in Power Engineering 	PRW302 Basic Research Method and Seminar	<ol style="list-style-type: none"> 1. Continuous Assessment: Portion of the final mark: 50% (mini Project) 2. Semester End Exam: Portion of the final mark: 50%
CNR	<ol style="list-style-type: none"> 1. BSc in Agriculture 2. BSc in Forestry 3. BSc in Environment and Climate Studies 4. BSc in Animal Science 	RES301 Research Methods	<ol style="list-style-type: none"> 1. Mid-semester exam 2. Practical 3. Assignment 4. Semester end examination
	BSc in Sustainable Development	RES201 Research Methods	<ol style="list-style-type: none"> 1. Continuous assessment (60%) <ol style="list-style-type: none"> 1.1. Written tests: 10% 1.2. Assignment (15%) 1.3. Questionnaire design (15%) 1.4. Research proposal (20%) 2. Final examination (40%)
	BSc in Food Science and Technology (nested)	RES202 Research Methods	<ol style="list-style-type: none"> 1. Written Test 2. Written Assignment 3. Questionnaire Design 4. Research Proposal 5. Semester End Examination
PCE	Bachelor of Education (Primary)	RES301 Introduction to Action Research	<ol style="list-style-type: none"> 1. Writing the Introduction of the research proposal 2. Writing the Literature Review of the AR proposal 3. Writing the methodology of the

			AR proposal 4. AR proposal presentation and defense
RTC	BA in Anthropology	UGR202 Anthropological Research Methods	1. Life history interview 2. Oral History documentation 3. Archival Research Project 4. Leading in class discussion 5. Class participation and preparedness 6. Midterm Examination
	1. BSc in Environmental Management 2. BA in Development Economics	UGR304 Research Methodology	1. In-class Exercises 2. Draft Literature Review 3. Draft Research Plan 4. Compiled Research Proposal 5. Midterm Examination
CLCS	<ul style="list-style-type: none"> BA in Bhutanese and Himalayan Studies (No new intake) BA in Language and Literature 	RES101 Basic Research Methods	1. Annotated bibliography 2. Literature review 3. Formulating research problem 4. Constructing Research question 5. Research Methodology 6. Sampling 7. Data Collection 8. Data Process 9. Abstract 10. Presentation
	BA in Dzongkha and Culture Studies	RES303 སྤྱིར་བཏང་ཞིབ་འཇོལ་ཐབས་ལམ།	1. སློབ་ཁང་ཚོས་རྒྱལ་ཁོག་གི་ (Class test) 2. མཚན་འགྲེལ་དཔེ་བློ། 3. རྩོམ་རིག་བསྐྱར་ཞིབ། (Literature Review) 4. ཞིབ་འཇོལ་དཀའ་ངལ། (Formulating research problem) 5. ཞིབ་འཇོལ་དྲི་བཞེད། (Constructing Research question) 6. ཞིབ་འཇོལ་ཐབས་ལམ། (Research method) 7. གནས་ལུང་བཟུང་ལེན་ཐབས་ལམ། (Data Collection Method) 8. གནས་ལུང་དབྱེ་དཔྱད་ཐབས་ལམ། (Data analysis method) 9. རྩོམ་རིག་འཇོལ་བྱ་རིམ་ལྟན་འཇགས། (research Report)
GCBS	BBA/BCom	RES301 Research Methods in Business	1. Identifying and formulating research problem 2. Writing a critical Literature

			<p>Review</p> <ol style="list-style-type: none"> 3. Developing appropriate research design and methods 4. Critiquing research papers 5. Data Preparation and Analysis 6. Writing a research proposal
NRC	BA in Development Studies	REM101 Research Methods	<ol style="list-style-type: none"> 1. Written assignment I and presentation (research problem statement) 2. Written assignment II (research design and Sampling design) 3. Written assignment III (questionnaire design) 4. Semester-end examination
	BA in Dzongkha and English	RSM309 10. ཞིབ་འཇོམས་ ཐབས་ལམ	<ol style="list-style-type: none"> 11. ལས་འགུལ་དང་པ། ཞིབ་འཇོམས་ཀྱི་དཀའ་ངལ་གསལ་བཤད། (Identifying Research Problem) 12. ལས་འགུལ་གཉིས་པ། ཚཱ་བྱིས་བསྐྱར་ཞིབ། (Literature review) 13. ལས་འགུལ་གསུམ་པ། ཞིབ་འཇོམས་ཐབས་ལམ། (Research methods) 14. ལས་འགུལ་བཞི་པ། རྒྱུ་ལྡན་ལྷན་དུ་དཔྱད་དུང་། (Data analysis) 15. ལས་འགུལ་ལྔ་པ། རྒྱུ་ལྡན་ལྷན་དུ་ཐོས་འཆར་། (Research Report writing) 16. ལས་འགུལ་དྲུག་པ། ཞིབ་འཇོམས་སྟན་ལུ། (Presentation of Research Findings)

>>>Annexure Three: Matrix of college, programme, module code and titles and unit titles of different research modules

College	Programme	Module Code and title	Unit titles of subject Matter
Sherubtse	<ol style="list-style-type: none"> 1. BSc in Mathematics 2. BSc in Statistics 3. BSc in Chemistry 4. BSc in Physics 5. BSc in Environmental Science 6. BSc in Life Science 7. BA in Population and Development Studies 8. BA in Economics 9. BA Political Science and Sociology 10. BA in English 11. BSc in Geography 12. BA in Data Science 13. BA in Media Studies 	RSM301 Research Methods	Unit I: Introduction Unit II: Research Problem Unit III: Review of Literature Unit IV: Research Design Unit V: Measurement and Sampling Unit VI: Ethics and Data Collection
	BA in History	HSM303	UNIT I: Usefulness and value of

		Methodology of Historical Research	Historical research (philosophy of history in brief) Unit II: A historical background of historical writing approaches (on selected ancient historical theme) Unit III: Procedural approaches to Reconstruction of Past UNIT IV: Historical Research Methodology Unit V: Qualitative and Quantitative methods
CST	1. BE in Civil Engineering 2. BE in Electrical Engineering 3. BE in Engineering Geology 4. BE in Instrumentation and Control Engineering 5. BE in Information Technology 6. BE in Electronics and Communication Engineering	PRW301 Introduction to Research	Unit I: Introduction Unit II: Proposal writing Unit III: Research Methodologies Unit IV: Literature Review Unit V: Data & Analysis Unit VI Referencing system Unit VII Report and publication
JNEC	BE in Mechanical Engineering	PRW303 Research Methodology	Unit I: Introduction Unit II: Proposal writing Unit III: Research Methodologies Unit IV: Literature Review Unit V: Data & Analysis Unit VI: Introduction to Design of Experiments (DOE)
	1. Bachelor of Engineering in Surveying & Geoinformatics 2. BE in Power Engineering	PRW302 Basic Research Method and Seminar	Part A: Basic of Research Methodology Introduction: Meaning, objective, motivation, types of Research. Research approaches, significance, research method versus methodology, how research is done (process), problem encountered by researchers Research Problem and Design: Defining and selecting research problems, techniques involved, defining and needs of research design, different research design with simple examples. Data collection, processing and analysis: various methods of collection, processing and analysis of data. Testing and report writing: Various test methods, characteristics, interpretation and report writing, steps in reports, types of reports, precautions.

			<p>Part B: Mini Project This will depend on student's interest and guide expertise. The final report must be as per the format set by the Institute</p>
CNR	<ol style="list-style-type: none"> 1. BSc in Agriculture 2. BSc in Forestry 3. BSc in Environment and Climate Studies 4. BSc in Animal Science 	RES301 Research Methods	<p>Unit I: Introduction to Research Methods Unit II: Types of Research Methods Unit III: Research Design and Variables Unit IV: Sampling Method Unit V: Research Instruments Unit VI: Communicating Research</p>
	BSc in Sustainable Development	RES201 Research Methods	<ol style="list-style-type: none"> 1. Introduction 2. Fundamental Concepts of Research 3. Data Collection 4. Case Study and Survey 5. Research Design 6. Experimental Research Design 7. Scientific Writing
	BSc in Food Science and Technology (nested)	RES202 Research Methods	<p>Unit 1: Introduction Unit 2: Fundamental Concepts of Research. Unit 3: Data Collection Unit 4: Case Study and Survey Unit 5: Experimental Research Design Unit 6: Research Design Unit 7: Literature review and reference management Unit 8: Scientific Writing</p>
PCE	Bachelor of Education (Primary)	RES301 Introduction to Action Research	<p>Unit I: The fundamentals of research Unit II: Introduction to Action Research Unit III: Reviewing the Literature Unit IV: Data collection Methods Unit V: Research Sampling Unit VI: Action Research Proposal Unit VII: Validity and Reliability Unit VIII: Ethics in Research Unit IX: Data Analysis Unit X: Research report writing</p>

			and publishing
RTC	BA in Anthropology	UGR202 Anthropological Research Methods	Unit I: Research Design Unit II: Research Ethics and Power in Anthropology Unit III: Interviews (Spradly, Seidman) Unit IV: Oral History Unit V: Archival Research Unit VI: Overview of other methods used by anthropologists Unit VII: Communicating findings
	1. BSc in Environmental Management 2. BA in Development Economics	UGR304 Research Methodology	Unit I: Introduction Unit II: Thinking Like a Researcher Unit III: Research Process Unit IV: Research Design Unit V: Measurement Constructs Unit VI: Sampling Unit VII: Common methods in social sciences research Unit VIII: Overview of additional select research designs
CLCS	1. BA in Bhutanese and Himalayan Studies (No new intake) 2. BA in Language and Literature	RES101 Basic Research Methods	Unit I: Introduction to Research Methods Unit II: Types of Research Methods Unit III: Research Design and Variables Unit IV: Sampling Method Unit V: Research Instruments Unit VI: Communicating Research
	BA in Dzongkha and Culture Studies	17. RES303 ལྷོ་རྒྱུ་རྩལ་གྱི་འཕུལ་སྐྱོད་ལཱ།	18. ལས་ཚན་དང་དཔེ་ཞུས་པའི་ཞིབ་འཇུག་གི་རྩོམ་སྒྲིག་(Introduction to Research) 19. ལས་ཚན་གཉེན་པོ་མི་རིགས་དང་འབྲེལ་བའི་ཞིབ་འཇུག་གི་ཕྱི་རྒྱུ་རྩལ་(Humanities Research) 20. ལས་ཚན་གསུམ་པོ་ཞིབ་འཇུག་གི་ཕྱོད་འགྲོ་བཤེར་གཞི་དང་འབྲུང་ལུང་(Research Topic and Sources) 21. ལས་ཚན་བཞི་པོ་ཞིབ་འཇུག་གི་ཕྱོད་འགྲོ་རྒྱུ་མི་རིགས་བསྐྱར་ཞིབ་(Literature Review) 22. ལས་ཚན་ལྔ་པོ་ཞིབ་འཇུག་གི་ཕྱོད་འགྲོ་ཞིབ་འཇུག་དཀའ་ངལ་སྤྲོད་པའི་དུས་ཚོད་འཆར་གཞི་(Formulating Research Problem Statement, Question and Design) 23. ལས་ཚན་དྲུག་པོ་ཞིབ་འཇུག་གི་དངོས་གཞི་གནས་ལུང་བསྐྱུ་ལེན་(Data Collection)

			<p>24. ལས་ཚན་བདུན་ ལ། ཞིབ་འཛུགས་དཔེ་ཚད་ འདུག་སྟེང་ (Research Sampling and Ethics)</p> <p>25. ལས་ཚན་བརྒྱུད་ ལ། གནས་སྟངས་ དཔྱད་དམག་ ལམ་ལུགས་ (Data Processing and Analysis)</p> <p>26. ལས་ཚན་དགུ་ ལ། ཞིབ་འཛུགས་འོ་སྟོན་དང་མཐུག་བསྟུན་ (Research Introduction and Conclusion)</p>
GCBS	BBA/BCom	RES301 Research Methods in Business	<p>1. Introduction</p> <p>2. Research Problems and Literature Review</p> <p>3. Research Methodology</p> <p>4. Analysis and Interpretation of Data</p> <p>5. Report Writing</p>
	BA in Development Studies	REM101 Research Methods	<p>Unit I: Introduction to research</p> <p>Unit II: Types of research methods and Sampling</p> <p>Unit III: Research ethics</p> <p>Unit IV: Literature review and problem statement</p> <p>Unit V: Research design</p> <p>Unit VI: Basic methods of data collection</p>
NRC	BA in Dzongkha and English	RSM309 ཞིབ་འཛུགས་ཐབས་ལམ་	<p>ལས་ཚན་དང་ལ། ཞིབ་འཛུགས་འོ་སྟོན་ (Unit I: Introduction to Research)</p> <p>ལས་ཚན་གཉིས་ ལ། ཞིབ་འཛུགས་ཀྱི་དོན་ལུ་ དཀའ་ངལ་དོས་འཛོམས་ (Unit II: Identification of Research Problem)</p> <p>ལས་ཚན་གསུམ་ ལ། རྩོམ་བྲིས་བསྟར་ཞིབ་ (Unit III: Literature review)</p> <p>ལས་ཚན་བཞི་ ལ། ཞིབ་འཛུགས་ཀྱི་ཐབས་ལམ་ (Unit IV: Research Methods)</p> <p>ལས་ཚན་ལྔ་ ལ། གནས་སྟངས་ དཔྱད་དམག་ (Unit V: Data Analysis)</p> <p>ལས་ཚན་དྲུག་ ལ། ཞིབ་འཛུགས་ཐུག་འབྲེལ་དང་གྲོས་འཆར་ (Unit VI: Research report writing)</p>