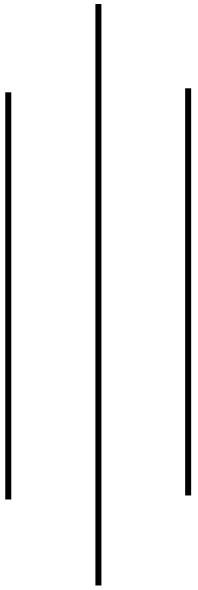
Tribhuvan University

Faculty of Humanities and Social Sciences

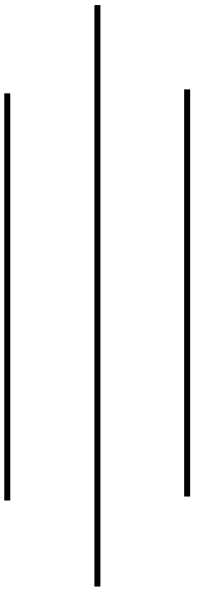
Central Department of Geography



Curriculum for PhD with Course Work

in

Geography



Geography Subject Committee

2019

Introduction

Tribhuvan University has introduced the Doctor of Philosophy Programme based on course work also. The syllabus is spread over three groups (i) subject specific courses (ii) literature review (reading list), and (iii) general methodology. Total credit hour for PhD is 60. A total of 18 credits are for subject specific courses. The literature review (reading list) and general research methodology each carries 6 credit totaling 30 credit courses. The remaining 30 credits are for thesis writing, internal evaluation, presentation, viva voce. The Central Department of Geography is responsible to offer subject specific courses and reading list with a total of 24 credits whereas the Dean's Office of the Humanities and Social Sciences is responsible for other remaining courses with a total credit of 36.

Evaluation

PhD candidate must obtain pass marks in all subjects separately in order to obtain the degree. There will be internal examinations in each semester carrying a weightage of 40% of the total marks. Similarly, 60% will be of end semester examination.

Course Structure and Distribution

Course type	Course Code	Course title	Credit hours	Semester	Responsibility
Subject specific	**Geog 751**	Geographic Thought I	3	First semester	**CDG**
	Geog 752	Geographic Thought II	3	First semester	**CDG**
	Geog 753	Qualitative and Quantitative Methods and Techniques	3	First semester	**CDG**
	Geog 754	Spatial Analysis and Remote Sensing	3	First semester	**CDG**
	Geog 761	Geographic Research in Nepal	3	**Second semester**	**CDG**
	Geog 762	Developing Research Agenda for PhD work	3	**Second semester**	**CDG**
General for all	**RPH771**	Philosophical Foundation of Social Science Research	3	**Second semester**	Dean's Office
	SRD772/AWR 773	Seminar on Research Design/Academic Writing	3	**Second semester**	Dean's Office
Specific to the topics of PhD candidate	**Geog 781**	Reading List - I	3	Third Semester	**CDG**
	Geog 782	Reading List- II	3	Third Semester	**CDG**
Specific to the topics of PhD candidate		Thesis writing, internal evaluation, presentation & viva voce	30	**After Third Semester**	Dean's Office

Geographic Thought I

Semester – First | Course No: **Geog 751**

Credit Hours – 3 | Lecture Hours – 48

Aims and objectives

This course aims to enhance the knowledge of PhD candidate on foundations, philosophies and approaches in geography with particular reference to the historical aspect of development of geography together with examination of contemporary development including the development of geography in Nepal.

Course Contents

1. Nature of geography **3**

1.1. Field of study
1.2. Changing trend
1.3. A new synthesis

2. Foundation of geography **30**

1.1. Classical geography, the age of exploration and the impact of discoveries
1.2. Schools of geographical thought: German, French, British, American, Arabian, and others
1.3. Development of geography in Nepal
1.4. Environmental determinism and possibilism; the landscapes, regions and regional geography
1.5. Concepts, hypothesis, model, law, theory and perceptions; theories and models of spatial (Locational) organization

3. Philosophies and approaches in geography **15**

3.1 Philosophy, its components and linkages with methodology
3.2 Empirical-analytical approaches: empiricism and positivism
3.3 Historical-hermeneutic approaches: behavioralism, phenomenology, existentialism, idealism, pragmatism
3.4 Critical approaches: Marxist, structuration, realism, post-modernism, post-structuralism

Required Readings

Adhikari, J. (2010). *Geography Education and Research in Nepal*. Kathmandu: Baha Occasional Paper 3, Social Science Baha and Himal Books.

Cresswell, T. (2013). *Geographic Thought: A critical introduction*. John Wiley & Sons.

Dikshit, R.D. (1997). *Geographical Thought: A Contextual History of Ideas*. New Delhi: Prentice Hall of India.

Harvey, D.H. (2003). *Explanation in Geography*. Jaipur: Rawat Publications.

Harvey, M. E. and Holly, B.P. (Eds.) (1981).*Themes in Geographic Thought*. London: Croom-Helm.

Holt-Jensen, A. (1999). *Geography – History and Concepts: A Student's Guide*. USA: SAGE Publications.

Hussain, M. (2004).*Evolution of Geographical Thought.* 5th Edition, Rawat Publication.

James, P.E. and Martin, G.F. (1981).*All Possible Worlds: A History of Geographical Ideas*. New York: John Wiley& Sons.

Johnston, R.J. (1996). *Geography and Geographers: Anglo-American Human Geography since 1945*. London: Edward Arnold.

Pauline C. (2014). *A Student's Introduction to Geographical Thought: Theories, Philosophies, Methodologies*. Sage

Peet, R. (1998). *Modern Geographical Thought*. Oxford: Blackwell Publications, Ltd.

Schaefer, F.K. (1953). "Exceptionalism in Geography: A Methodological Examination." Annals of the Association of American Geographers 43: 226-249.

Subedi, B. P. (2014). *State of Geography Teaching and Research in Nepal: A Review and Reflection*. Martin Chautari and Himal Books.

Geographic Thought II

Semester – First | Course No: **Geog 752**

Credit Hours – 3 | Lecture Hours – 48

Aims and objectives

This course is the continuation of the course Geog 701. This course aims to enhance the knowledge of candidate on the paradigms and revolutions, geographical binaries and their deconstruction as well as recent trends in geographic research.

Course Contents

1. Nature of geography **3**

1.1 Nature and geography
1.2 Nature in geography
1.3 Nature of geography

2. Paradigms and revolutions **15**

2.1 Induction, deduction and abduction
2.2 Application of Kuhn's paradigms in Geography
2.3 An idiographic or nomothetic science
2.5 Revolutions in geography
2.6 Spatial science and its critics
2.7 Emergence of humanistic geography

3. Major geographic ideas/concepts that changed the world **10**

3.1 Idea of map
3.2 Human adjustment
3.3 Sense of place
3.4 Megalopolis

4. Some geographical binaries and their deconstruction **10**

4.1 Nature: Culture
4.2 Man: Women
4.3 Global: Local

4.4 Time: Space

5. Processes in space and place **10**

5.1 Geography at the turn of the millennium

5.2 Place, space and territory

5.3 Geographies of exclusion

5.4 Towards pluralism

5.5 Explanation and description

5.6 Future of geography

Required Readings

Adhikari, J. (2010). *Geography Education and Research in Nepal*. Kathmandu: Baha Occasional Paper 3, Social Science Baha and Himal Books.

Cresswell, T. (2013).*Geographic Thought: A critical introduction*. John Wiley & Sons.

Dikshit, R.D. (1997). *Geographical Thought: A Contextual History of Ideas*. New Delhi: Prentice Hall of India.

Hanson, S. (ed.) (1997). *Ten Geographic Ideas That Changed the World*. New Jersey: Rutgers University Press.

Harvey, D.H. (2003). *Explanation in Geography*. Jaipur: Rawat Publications.

Harvey, M. E. and Holly, B.P. (Eds.) (1981).*Themes in Geographic Thought*. London: Croom-Helm.

Holt-Jensen, A. (1999). *Geography – History and Concepts: A Student's Guide*. USA: SAGE Publications.

Hussain, M. (2004).*Evolution of Geographical Thought.* 5th Edition, Rawat Publication.

James, P.E. and Martin, G.F. (1981).*All Possible Worlds: A History of Geographical Ideas*. New York: John Wiley& Sons.

Johnston, R.J. (1996). *Geography and Geographers: Anglo-American Human Geography since 1945*. London: Edward Arnold.

Pauline C. (2014). *A Student's Introduction to Geographical Thought: Theories, Philosophies, Methodologies*. Sage

Peet, R. (1998). *Modern Geographical Thought*. Oxford: Blackwell Publications, Ltd.

Schaefer, F.K. (1953). "Exceptionalism in Geography: A Methodological Examination." Annals of the Association of American Geographers 43: 226-249.

Subedi, B. P. (2014). *State of Geography Teaching and Research in Nepal: A Review and Reflection*. Martin Chautari and Himal Books.

Qualitative and Quantitative Methods and Techniques

Semester – First | Course No: **Geog 753**

Credit Hours – 3 | Lecture Hours – 48

Aims and objectives

This course aims to enhance the knowledge and skill of the PhD candidate on the methods and techniques for research in geography. This course is basically for qualitative and quantitative methods and techniques. In this course, PhD candidate will be familiar with different qualitative and quantitative techniques used in geographical research and will be able to select and use appropriate techniques and tools in their research work.

Course Contents

1. Qualitative methods and techniques **16**

1.1. Nature of qualitative data, sources, and issue of representativeness 2

1.2. Linkages of philosophy, methodology, methods and techniques 1

1.3. Methods of data collection (the issue of setting context and status of researcher, different types of interviews, participatory research methods and observation) 4

1.4. Discovering and analysis of 'category' and 'event' 2

1.5. Processing of qualitative data (Conceptualization, coding, categorizing, and examining relationships) 2

1.6. Analysis of qualitative data: Data analysis 'as a process' 3

1.7. Methodological triangulation and self-reflection 1

1.8. Computer based qualitative data analysis 1

2. Quantitative methods and techniques **32**

2.1. An overview of quantitative techniques (Concept and applications) 1

2.2. Sampling design, methods and estimation and its application in geographic research (Probability samplings - random, stratified-cum-random, systematic, and cluster-cum-random, multi-stage sampling; non-probability samplings (purposive, judgmental, quota & snow-ball) 7

2.3. Distribution of sample data (Outliers, normality and transformation, graphical representation – quintile plot & box whisker plot) 2

2.4. Simple, partial and multiple correlations& regression including significance test 5

2.5. Analysis of time series data (Components, trend and variation measurement) 2

2.6. Statistical inferences (Hypothesis testing & estimation for point and interval; parametric test- student t-distribution, z-distribution, F-distribution, analysis of variance including MANOVA; non-parametric test-χ2- distribution, Mann Whitney U test, Kruskul Wallis Test) 7

2.7. Multivariate data analysis (Factor analysis both Q and R-mode; principal component analysis, cluster analysis, canonical correlation analysis, discriminant analysis. 3

2.8. Statistical and spatial model building (Single and double quantitative independent variables, qualitative independent and quantitative variables and stepwise regression) 3

2.9. Introduction to data analysis software- SPSS or R- program 2

Required Readings

Aase, T. H. (1997). Interpretation of Categories. Observation, Concept and Category (English Translation), in Fossåskaret E., Fuglested O. L., Aase T.H., red.: *Metodiskfeltarbeid, produsksjonogtolkningavkvalitative data*, Universitetsforlaget.

Barber, G.M. (1988). *Elementary Statistics for Geographers*. New York: The Guilford Press.

Chorley, R.J. and Haggett, P., eds. (1967). *Models in Geography*. London: Methuen.

Clark, W.A.V. and Hosking, P.L. (1986). *Statistical Methods for Geographers*. New York: John Wiley and Sons.

Clifford, N., French, S. and Valentine, G. (eds.) (2010). *Key methods in Geography* (2nd, edition).SAGE Publications Ltd. London.

Denzin, N.K. (1994). The art and politics of interpretation.In Denzin N. K and Lincoln, Y. S. (Eds.). *Handbook of Qualitative Research. London: Sage.*

Hay, I. (4th Ed.)(2016). *Qualitative Research Methods in Human Geography (selected chapters)*.Oxford University Press.

Kitchen R., and Tale, N. J. (2000).*Conducting research into Human Geography: Theory, methodology & practice (selected chapters).* Harlow: Pearson Education Limited.

Kothari, C. R & Gaurav Garg. (2014). *Research Methodology: Methods & Technique*, New Age International P limited Publishers.

Kothari, C. R. (1997). *Quantitative Techniques*. Delhi: Vikash Publishing House Pvt. Ltd.

Mandal, U. K. (2005). A functional Ecological Study of Municipal Town in Nepal: A Factor Analysis Approach. *Tribhuvan University Journal*, Kirtipur: Research Division, T.U. Kirtipur , Kathmandu, Nepal.

Mandal, U. K. (2005). Identification of Major Components of Relative Importance of Periodic Markets Using Principal Component Analysis: A Case Study of Saptari District, Eastern Terai Region of Nepal. *Proceedings of the National Conference on Geography in Nepal: Mountain Environment and Human Activities*. Kathmandu: Central Department of Geography, TU, Nepal Geographical Society and National Centre of Competence in Research North-South .

Mandal, U. K. (2006). Determination of Relative Importance of Periodic Market places in Rural Development in Saptari District, Eastern Nepal: A Multiple Regression Approach. *Nepalese Journal of Development and Rural Studies*. Kirtipur: Central Department of Rural Development, T.U. Kirtipur, Kathmandu, Nepal.

Mandal, U. K. (2009). SPSS Application to Multivariate Data Analysis, *Research Methodology Manual*, Kirtipur: Central Department of Geography, TU Kirtipur & NCCR.

Mandal, U. K. (2010). Agricultural Regionalization in Nepal: Q-Mode Factor Analysis Approach, *Perspective on Higher Education: A Journal of University Campus* Volume 4 & 5. Kirtipur: Nepal University Teacher Association, Central Campus Unit Committee.

Mandal, U. K. (2010). Logit Analysis of Violence Against Women in Marginalized Communities, Eastern Terai Region of Nepal, *TU Journal*. Kirtipur: Research Division, Rector's Office , Tribhuvan University (TU).

Nicholas Clifford, Shaun French, Gill Valentine. (2010). *Key methods in Geography* (selected chapters).Sage.

Rayment, R. and Jeroskog, K.G. (1996). *Applied Factor Analysis in the Natural Sciences*.Cambridge University Press.

Williams, R.B.G. (1984). *Introduction to Statistics for Geographers and Earth Scientists*. London: Macmillan.

Spatial Analysis and Remote Sensing

Semester – First | Course No: **Geog 754**

Credit Hours – 3 | Lecture Hours – 48

Aims and objectives

This course aims to enhance the knowledge and skill of the PhD candidate on the techniques and tools for research in geography. This course is basically on the technique and tools of GIS based spatial analysis and Remote Sensing. In this course, PhD candidate will be familiar with techniques and tools for spatial analysis and will be able to select and use appropriate techniques and tools in their research work.

Course Contents

1. Spatial analysis		**32**
1.1	Spatial analysis: Concepts, Spatial analysis and GIS	3
1.2	Spatial analysis: Spatial data characteristics, organization and Integration	4
1.3	Issues and challenges in spatial analysis	3
1.4	Point pattern analysis (Nearest neighbor, quadrat, distribution, trend, process models)	6
1.5	Proximity analysis (Buffer, Voronoi/Thiessen)	4
1.6	Spatial relationship and surface analysis (Spatial associations, spatial autocorrelation, spatial interpolation)	6
1.7	Spatial interactions and network analysis (Location-allocation, Path & flow, spatial choice, least cost, connectivity, shortest path)	6
2. Remote sensing: An earth observation technique		**16**
2.1	Introduction and history	2
2.2	Concept of resolutions - spatial, spectral, radiometric, and temporal	2
2.3	Multispectral remote sensing and its application	2
2.4	Thermal, microwave, and hyper-spectral remote sensing and their application	2
2.5	Introduction to aerial photography and its application	2
2.6	Image rectification, interpretation and analysis	2
2.7	Image classification	2
2.8	Ground truthing and classification accuracy validation	2

Required Readings

Campbell, J. B. (1987). *Introduction to remote sensing*. The Guilford Press, New York.

deSmith, Goodchild, MF and Longley, PA (2015). *Geospatial analysis: A comprehensive guide to principles, techniques and software tools.* A Web-book

Esri (2013).*The language of spatial analysis*. Esri Press, Redlands, California.

Fischer, M. M. (2006). *Spatial analysis and geo-computation: selected essays*. Springer, Berlin.

Fotheringham, A. S and Wegener, M. (eds.) (2000). *Spatial models and GIS: New potential and new models.* Taylor and Francis, London.

Fotheringham, S and Rogerson, P (eds.) (2005).*Spatial analysis and GIS*.Taylor& Francis Ltd. London.

Haggett, P., Frey, A. E., and Cliff, A. D. (1977).*Locational analysis in human geography*. John Wiley & Sons. England.

Jensen, John R. (1986*). Introductory Digital Image Processing*. Prentice-Hall, New Jersey.

Lillesand, T.M. and Kiefer, R.W. (1994) *Remote Sensing and Image Interpretation*. John Wiley and Sons Inc., New York.

Lloyd, C. D. (2010). *Spatial data analysis: An introduction for GIS user*. Oxford University Press. New York.

Longley, P. A. Goodchild, M. F., Maguire, D. J. and Rhind, D. W. (2005). *Geographical information systems and science*.2nd Edition. John Wiley & Sons Ltd. England.

Russ, John C. (1995).*The Image Processing Handbook*. CRC Press, Baca Raton

Geographic Research in Nepal

Semester – Second | Course No: Geog 761

Credit Hours – 3 | Lecture Hours – 48

Aims and Objectives

This course aims to enhance the knowledge base of candidates on the disciplinary aspects of research in geography. The discussions and deliberations will primarily focus on geographic research works in Nepal. The underlying intention of this course is to strengthen the candidate's background in possible research areas by providing a state of art of geographic research works in the country. This in turn is meant to provide foundation for doctoral research to be carried out by the candidates.

The specific objectives of the course are to: i) augment the knowledge base of candidates on key research areas in geography, ii) enable them to analyze the changing focus of geographic research works over time both thematically and methodologically, and iii) facilitate them to pursue their research interest so as to develop draft preliminary proposal for their doctoral research work.

Course Contents

This is primarily a seminar type of course. The agendas are flexible and the details of contents will be flexible depending upon the acquaintance level and interest of the registered candidates. The Instructor together with the candidates will finalize the actual topics of seminar/discussion. Candidates are required to give presentation on the selected themes of geographic research works. During the course candidates are required to give at least two presentations. The presentations may last for 45 minutes to an hour followed by discussion. The course content will follow two modules.

Modules	**Lecture hours**
Module One: **Introducing research issues in geography** This includes a brief recapitulation of geographic research works and agenda covering: exploration and travelogue; geographic research agenda before Second World War; geographic research agenda after Second World War (Scientism, Marxism, Qualitative revival and Humanistic trends)	18
Module Two: **Research issues in geography in Nepal** It includes main research areas, their areal, thematic and methodological coverage: Before 1970s; 1970s to 1990s; 1990 onwards; emerging issues	30

References

Primarily prescribed by the Instructor including websites, specific issues of geographical journals such as Annals of the Association of American Geographers, Geographical Review, Institute of British Geographers, and Geographical Journals published from India and Nepal. Some additional references include the followings:

Adhikari, J. (2010). *Geography Education and Research in Nepal*. Kathmandu: Baha Occasional Paper 3, Social Science Baha and Himal Books.

James, P.E. and Martin, G.F. (1981).*All Possible Worlds: A History of Geographical Ideas*. New York: John Wiley& Sons.

Johnston, R.J. (1996). *Geography and Geographers: Anglo-American Human Geography since 1945*. London: Edward Arnold.

Koirala, H.L. (2010). Are Geographer's Research Methodologies Really Poor? *Tribhuvan University Journal*, Vol 27, No. 1/2: pp 61-70

Subedi, BP & Joshi BD (1997). About Geography in Nepal: An Outline for Discussion," in Khatry, Prem ed. *Social Sciences in Nepal: Some Thoughts and Search for Direction.* Kathmandu: Centre for Nepal and Asian Studies, pp. 90-112.

Subedi, BP &Poudel PC eds. (2005). *Geography and Geographers Work in Nepal: Reflections on Mountain Environment and Human Activities*. Kathmandu: Nepal Geographical Society/Central Department of Geography/NCCR North-South

Subedi, BP, Poudel PC & Poudel K P eds. (2006).Proceedings of the National Conference on *Geography in Nepal: Mountain Environment and Human Activities* (Edited). Kathmandu: Central Department of Geography, Nepal Geographical Society and NCCR North-South.

Subedi, BP. (2014). *State of Geography Teaching and Research in Nepal: A Review and Reflection*. Kathmandu: Martin Chautari.

Developing Research Agenda for PhD work

Semester – Second | Course No: **Geo 762**

Credit Hours – 3 | Lecture Hours – 48

Aims and Objectives

This course aims to enhance the knowledge base of candidates on the disciplinary aspects of research in geography. The discussions and deliberations will primarily focus on geographic research issues in Nepal especially based on candidate's research interest. The underlying intention of this course is to strengthen the candidate's background in possible research areas to be pursued in doctoral research and focus their attention towards his/her own specific research agenda as far as possible. The specific objectives of the course are to: i) augment the knowledge base of candidates on key research issues in geography, ii) enable them to ascertain their areas of research interest within the broad field of geography, and iii) facilitate them to pursue their research interest so as to develop draft preliminary draft proposal for their doctoral research work.

Course Contents

This is primarily a seminar type of course. The agendas are flexible and the details of contents will be flexible depending upon the acquaintance level and interest of the registered candidates. Basically the course attempts to enhance the skill of the candidates on academic writing as well as prepare a research proposal on the areas of candidate's interest. Candidates are required to give presentation on the selected themes of geographic research works. During the course candidates are required to give at least two presentations. The presentations may last for 45 minutes to an hour followed by discussion. The course content will follow two modules.

Modules	**Lecture hours**
Module One: **Enhance the skills on academic writing particularly focusing on critical reviews, research articles and reports** It includes review of available research works in the area of interest of the candidate as well as writing critical reviews, research articles and reports and presentation.	**24**
Module Two: **Search for research agenda within geography of Nepal or else and working on preliminary research proposal (Flexible mode)** This module focuses on the candidate's preliminary research agenda with discussions and presentations. It also includes preparing a draft of workable research proposal for doctoral research.	**24**

References: As prescribed by the Instructor including websites and latest journals

Reading List – I

Semester – Third | Course No: **Geog 781**

Credit Hours – 3 | Lecture Hours – 48

Aims and Objectives

This course aims to enhance the skill of PhD candidates to access, compile and process the materials/information relevant to the topics of his/her research and knowledge base in reviewing critically the relevant literatures and to prepare a synthesis paper on primary areas.

Course Contents

Students will prepare Reading List in consultation with Supervisor and Co-Supervisor and will review the literatures for Primary areas (History/Data/Empirical Research). Reading List will comprise of books, book chapters, articles, research reports, websites, etc.

At the end of the semester students will submit a **Synthesis paper on Primary area** with 5000-7000 words to the supervisors.

Reading List – II

Semester – Third | Course No: **Geog 782**

Credit Hours – 3 | Lecture Hours – 48

Aims and Objectives

This course is the continuation of Geog. 781. This course also aims to enhance the skill of PhD candidates to access, compile and process the materials/information relevant to the topics of his/her research and knowledge base in reviewing critically the literature so far collected and to prepare a synthesis paper on concept/theories/models/methods.

Course Contents

Students will prepare Reading List in consultation with Supervisor and Co-Supervisor and will review the literatures covering the concepts/philosophies/models/theories and methods. Reading List will comprise of books, book chapters, articles, research reports, websites, etc.

At the end of the semester students will submit a **Synthesis paper on concept/theories/models/ methods** with 5000-7000 words to the supervisors.

Note:

After submission of **Two Synthesis papers**, the students will have to sit for **Comprehensive Examination** as per the routine set by the Department.

Students will revise research proposal based on the insights gained from the reading lists and submit to the Department. Students can use synthesis papers in the dissertation proposal.

Next Step:

Dean's Office will publish a call for Dissertation Proposal after completion of Comprehensive Examination/ departmental defense of proposal. Only those students who have been passed in the semester and comprehensive examination will be permitted to proceed to the Dissertation writing Phase.