Course Title: **Basic Research Methodology in Education**

Course No: Ed 532 Nature of Course: Theoretical

Level: M. Ed. Credit Hours: 3

Semester: Third Total Teaching Hours: 48

1. **Course Introduction**

This is a basic educational and social research methodology course aimed at helping students broaden their knowledge and skills in doing and writing quantitative, qualitative, and mixed research. The course begins with introducing social and educational research based on philosophies, and then enables students to select appropriate research designs and tools to conduct the research. The students will acquire knowledge and skills required for conducting research in both quantitative and qualitative areas. Taking survey (and other quantitative research methods), ethnographic, phenomenological, and narrative inquiry methods at disposal learners will chart the journey of scholarship about different research designs. In addition, there will be an opportunity for the students to familiarize themselves with quality and ethical standards needed by researchers. Finally, the course will enable the students to prepare research proposal and write report following the guidelines of American Psychological Association (APA)’s publication manual.

1. **General Objectives**

The general objectives of the course are to enable students to:

* Demonstrate the understanding of philosophical grounds of positivistic and interpretive research.
* Generate the research problems from within the field of interest of the students themselves engaging in the discourse and debates of knowledge in the field.
* Develop skills of reviewing different forms of literature for justifying the research and setting a lens of explaining phenomena of inquiry.
* Conceptualize the strategies of engaging in the field of research and processing different forms of data.
* Select appropriate design for conducting the research.
* Develop basic skills for tools construction, data collection, and analysis.
* Describe the need for ethical and quality standards in research project.
* Prepare research proposal for conducting the research.
* Use citation and referencing using APA guidelines.
* Write research report based on the APA guidelines.

1. **Course Details**

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| **Unit I: Understanding Social and Educational Research Based on Philosophies (8 hrs.)** | | | |
| Specific Objectives | | Contents | Content coverage |
| * Develop the basic concepts of research and characteristics * Describe the concept of quantitative (i.e., positivistic/post positivist) and qualitative (i.e., interpretive) research paradigms in relation to chosen research problem; and * Differentiate the philosophical assumptions of positivistic and interpretive research paradigms * Generate quantitative and qualitative research problems * Formulate hypotheses and research questions * Conceptualize and explain the purpose and procedure of review * Review different forms of literature * Select appropriate theoretical framework and translate it into conceptual diagrams. | | * 1. Basic concepts of social and educational research   2. Needs/ use of educational and social research   3. Concept of research paradigms      1. Positivism and post positivism      2. Interpretivism   4. Differences on key tenets of quantitative and qualitative research   5. Problematizing the issue of inquiry      1. Selecting research problems for qualitative and quantitative research      2. Formulating research objectives/purpose, framing research questions and developing hypothesis (if required)   6. Reviewing literature: Importance and strategies   7. Theoretical and conceptual frameworks | 1. Meaning and characteristics of research, and social and educational research 2. Paradigms and its components (ontology, epistemology, axiology, and methodology) 3. Meaning and characteristics of positivism and interpretivism (and their ontologies, epistemologies, axiologies, and methodologies) 4. Concepts, meaning, characteristics examples and differences of qualitative and quantitative research 5. Selecting research problem of their own discipline and formulating specific research objectives and research questions (concepts and examples) 6. Meaning and concepts of literature review, importance of literature review, strategies for doing literature review, reflecting the review 7. Meaning and examples of theoretical and conceptual framework |
| **Teaching Learning Strategies** | | | |
| Teacher’s Inputs (8 hrs.) | | Students' Efforts (16 hrs.) | Tasks for Assignment |
| * Orientation to the students about the topics, their roles, and requirements * Sharing ideas on content areas * Discussion and reflection * Reviewing books and articles related to content areas * Presentation of ideas, discussion, and feedback | | * Take part in discussion during discussion and presentation session * Search and collect learning materials for review * Review recommended books and articles individually * Select a research issue and develop research objectives and questions * Gets feedback from peers and teachers. | * Select a research issue/title, formulate research objectives, and research questions and write the importance or rational for doing this study. * Select a research issue, collect 4-5 relevant literature, review the literature and write a short review. |
| **Unit II: Comprehending Research Methodologies and Methods (14 hrs.)** | | | |
| Specific Objectives | | Contents | Content coverage |
| * Explain the key characteristics of major positivistic and non-positivistic research methodologies * Choose appropriate research methodology for the issue of inquiry chosen * Describe critically the relationship between research problem/agenda and methodology(s) | | * 1. Quantitative research methodologies/methods      1. Survey and its types      2. Experimental designs   2. Qualitative methodologies/methods      1. Case study      2. Ethnography      3. Narrative inquiry      4. Phenomenology      5. Grounded Theory   3. Mixed method research: sequential, parallel, and embedded   4. Action research and its characteristics | 1. Rationales for choosing a particular research design 2. Concept, meaning, characteristics of each design. 3. Steps for doing the research. 4. Examples of each design. |
| **Teaching Learning Strategies** | | | |
| Teacher’s Inputs (14 hrs.) | | Students’ Effort (28 hrs.) | Tasks for Assignment |
| * Sharing theoretical ideas and reflection on various design of the research * Facilitate students for reflecting on the strategies for using appropriate research design * Provide a comparative overview of quantitative and qualitative designs separately | | * Participate in discussions and sharing ideas among the peers and facilitators * Presenting reflection of the ideas based on reading books and papers * Work in pair or group and reflect on various designs with their strengths and limitations * Choose appropriate design for doing a particular research. | * Choose an appropriate research design and make a plan about what issue you want to study using this design and how. * Select a research issue or problem for action research and prepare a plan for doing the research. |
| **Unit III: Strategies of Selecting Respondents/Participants and Collecting Data (8 hrs.)** | | | |
| Specific Objectives | | Contents | Content Coverage |
| * Conceptualize population and sampling procedure * Describe key techniques of selecting the research participants based on informed techniques * Developing different forms (questionnaires and guidelines) of tools and collecting data with the help of tools * Explain the ways of engaging meaningfully in the field with structured and open interviews and observations | | * 1. Strategies of selecting respondents/participants      1. Determining sampling size in quantitative research      2. Sampling strategies for quantitative research      3. Sampling strategies for qualitative research   2. Tools and techniques of data collection      1. Quantitative data collection tools  1. Questionnaire 2. Structured interview 3. Attitude scale 4. Test    * 1. Qualitative data instruments 5. Unstructured interviews 6. Participant observation 7. Focus group discussions 8. Field notes | 1. Concept of population, sampling 2. Sample size calculation using Yamane’s formula. 3. Sampling for quantitative study - simple random, stratified random, systematic, cluster, etc. 4. Sampling for qualitative study: Purposive, quota, convenience, snowball, etc. 5. Tools – Introduction, types, characteristics, examples, strengths, limitations |
| **Teaching Learning Strategies** | | | |
| Teacher’s Inputs (8 hrs.) | | Students’ Effort (16 hrs.) | Tasks for Assignment |
| * Providing resources, concepts and examples * Facilitating students to identify appropriate sampling design and techniques * Assisting students to calculate sample size * Facilitating students for designing appropriate data collection tools | | * Reflect on the concepts and examples provided by teachers * Read the resources provided about sampling and tools s * Select appropriate sampling techniques that best fit to the issues/problems of the study * Design appropriate data collection tools for the issues/problems selected | * Select an appropriate issue for a survey study and design a questionnaire for studying this issue from a particular group of respondents. * Elaboration based on the following questions: Which specific research methodology(s) do you plan to apply for your research problem? Why? Describe your study site, population and sampling (in positivistic research)/selecting participants (in non-positivistic research). |
| **Unit IV: Data Analysis and Quality Standards in Research (8 hrs.)** | | | |
| Specific Objectives | | Contents | Content Coverage |
| * Describe basic data production and analysis methods in research project; and * Discuss reflectively the experiences of learning of different approaches to data production and analysis | | * 1. Quantitative data analysis      1. Data cleaning and coding      2. Statistical procedures of analyzing data (descriptive and inferential)   2. Working with textual/qualitative information      1. Coding, transcribing, generating themes, and interpreting meaning      2. Crafting narratives, vignettes, and stories   3. Quality standard in research      1. Internal validity, external validity reliability and objectivity in quantitative research      2. Credibility, transferability, dependability, and conformability in qualitative research   4. Ethical issues in research | 1. Data cleaning, coding, entering, analysis using Excel or SPSS. 2. Data analysis using Central Tendency and Measure of Dispersion (No. need of calculation); introduction of EXCEL and SPSS software for analyzing the quantitative data. 3. Thematic techniques for qualitative data analysis [doing small interview, transcribing (transferring raw data into text), coding, comparing, grouping, theme generating, interpreting]. 4. Strategies for integrating verbatim quotes, paraphrasing narratives, displaying vignettes and stories or case. 5. Quality for quantitative analysis – internal and external validity, reliability and validity (concept and examples) 6. Quality for qualitative data analysis (credibility, transferability, dependability and confirmability and strategies form ensuring them such as triangulation, peer review, thick description, member check, prolonged engagement in the field etc.) 7. Ethical issues – informed consent, confidentiality, trust, reciprocity, no manipulation of data, academic honesty. |
| **Teaching Learning Strategies** | | | |
| Teacher’s Inputs (8 hrs.) | | Students’ Effort (16 hrs.) | Tasks for assignment |
| * Provide an overview of quantitative and qualitative data analysis techniques. * Provide examples of quantitative data analysis using EXCEL or SPSS software. | | * Read the materials and resources provided by teachers and reflect on the quantitative and qualitative data analysis techniques * Doing practice of Excel or SPSS data analysis. * Reflect on quality standards on qualitative and quantitative data and results. | * Interview few participants on a particular group of respondents, audio record and transcribe the interview. By coding, comparing and grouping, make a few themes and interpret them. * Make a survey questionnaire on a particular issue. |
| **Unit V: Preparing Research Proposal and Research Report (10 hrs.)** | | | |
| Specific Objectives | | Contents | Content Coverage |
| * State the need of proposal and requirements for research report * Explain essential components of research proposal * Develop a research proposal in chosen/given research problems. * Describe essential skills and steps in research report writing * Explain the components of research report/thesis * Use APA format in thesis writing | * 1. Need of preparing research proposal   2. Components of research proposal   3. Preparing research report based on the APA format      1. Components of research report      2. General formats and guidelines for preparing research report      3. Citations      4. Referencing | | 1. What is research proposal, why research proposal is important, what are the components of the research proposal, what is the difference between qualitative and quantitative research proposal 2. Research report: needs and formats 3. APA guidelines for preparing research report – general formatting, citation and referencing |
| **Teaching Learning Strategies** | | | |
| Teacher’s Inputs (10 hrs.) | | Students’ Effort (20 hrs.) | Tasks for Assignment |
| * Presentation of need and components of research * Demonstration of sample of proposal * APA presentation (mainly the formatting of the report, citation and referencing) * Presentation of example/sample of APA report and article | | * Reading, reflection and understanding – research proposal, research report and their components * Group work on reviewing research proposal and research report * Practice on APA citation and referencing | * Choose a research issue and prepare a brief proposal to conduct research on the selected issue. |

1. **Evaluation Criteria** (Internal 40%, External 60%)

Students’ learning will be evaluated based on 40% internal assessment and 60% external examination. Evaluation criteria will be as explained below.

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| **Criteria** | **Mark** | **Remarks** |
| **Internal Assessment:** The internal assessment will be formative as well as summative in nature which includes following activities. | | |
| Attendance | 5 | 70-80=3, 81-90=4, 91-100=5 |
| Class participation | 5 | Presentation (either in pair or individual) of the given task in an original and natural style. |
| Assignment I  (Individual task) | 10 | Any one task from Units I or II. |
| Assignment II  (Group task) | 10 | Any one task from Units III or IV or V. |
| Assignment III  (Individual test) | 10 | Written examination: Objective and subjective items |
| **External Evaluation:** The external 60% written test covers the following nature of test items and points. | | |
| External written  examination | 60 | Group A: Objective items (10× 1) = 10  Group B: Short answer type items (6× 5) = 30 (including two or questions)  Group C: Essay type items (10× 2) = 20 (including one or question) |

1. **Recommended Books and References**

American Psychological Association. (2010). *Publication manual of the American Psychological Association*. Washington, DC: American Psychological Association.

Bryman, A. (2012). *Social research methods*: UK: Oxford University press.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. London and New York: Routledge

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks: Sage.

Gobson, W. J., & Brown, A. (2009). *Working with qualitative data.* New Delhi: Sage Publications Inc.

Hesse-Biber, S. N. (2010). *Mixed methods research: Merging theory with practice*: Guilford Press.

Taylor, P. C., & Wallace, J. (Eds.). (2007). *Contemporary qualitative research: Exemplars for science and mathematics educators*. Dordrecht: Springer.

Taylor, P. C., Taylor, E., & Luitel, B. C. (2012). Multi-Paradigmatic transformative research as/for teacher education: An integral perspective. In K. Tobin, B. Fraser & C. McRobbie (Eds.), *Second international handbook of science education* (pp. 373-388). Dordrecht, The Netherlands: Springer.

Taylor, P.C. & Medina, M. (2011). Educational research paradigms: From positivism to pluralism. *College Research Journal, 1*(1), 1-16. Assumption College of Nabunturan, Philippines.

Course Title: **Measurement and Evaluation in Education**

Course No.: Ed. 533 Nature of Course: Theoretical

Level: M. Ed. Credit Hours: 3

Semester: Third Total teaching Hours: 48

1. **Course Introduction**

The course ‘Measurement and Evaluation in Education’ is a core area of study designed for the third semester of master's degree program of faculty of education. This includes the concept and nature of educational measurement and evaluation thereby focusing on reliability and validity of a test. The course emphasizes on construction process of achievement test, standardization process of psychological tests, and critical analysis of evaluation system adopted in school level.

1. **General Objectives:**

* Analyze the relation among test, measurement, evaluation, and assessment,
* Critically analyze evaluation system of Nepal including grading system,
* Introduce concept, need, and use of reliability of test,
* Compute reliability using different methods,
* Orient to validity and validity consideration with its uses,
* Determine validity of test applying different methods,
* Construct achievement test using different processes,
* Advance understanding about standardizing process of psychological tests.

1. **Course Details**

In order to achieve the expected outcomes of the course, the following specific objectives, contents, content elaboration are framing in the table below:

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| **Unit I: Educational Measurement (8 hrs.)** | | | |
| Specific objectives | Contents | Content coverage | |
| * Develop concepts of measurement and evaluation * Elaborate use of evaluation * Show relationship among test measurement and evaluation * Introduce scales of measurement and elaborate its use * Explain the current trends in educational measurement * Critically analyze role and function of National Examination Board and National Assessment of Student. * Analyze internal assessment of school education in Nepal * Introduce grading system and analyze its merits and demerits | * 1. Test, measurement, evaluation, and assessment.   2. Purpose and use of educational evaluation   3. Difference among measurement, assessment, and evaluation   4. Measurement scales   5. Current trends in educational measurement   6. Student evaluation in school education in Nepal | 1. Concept of test, measurement, evaluation, and assessment 2. Purpose and use of evaluation (instructional, research, planning, decision making) 3. Key differences among the construct measurement, assessment, and evaluation 4. Measurement scales (nominal, ordinal, interval, and ratio) with properties and uses 5. Current trends in educational measurement ('High stakes' testing, performance and portfolio assessment-concept and tools development, technological advances in testing-general introduction and use of ICT in evaluation) 6. Internal and external assessment in schools, National Examination Board-structure and function, and National Assessment of Student Achievement -NASA- introduction, practice and use. Grading system (conventional, letter grading, GPA, CGPA, process, merits and demerits) | |
| **Teaching Learning Strategies** | | | |
| Teacher's Inputs (8 hrs.) | Students’ Efforts (16 hrs.) | Tasks for assignment | |
| Introduce overall course and requirements, provide resources for study, deliver classes using different methods, orient students about the review, allocate content for presentation (provide opportunity to choose favorable content). Supervise required task, evaluate the task and provide feed-back. | Be oriented about the course and requirements, collect, and study the resources, choose/select a task from the content area, accomplish required task, present the task and gets feed-back from peers and teachers. | Review a book /book chapter based on the any content area of the course. | |
| **Unit II: Reliability and Standard Error of Measurement (10hrs.)** | | | |
| Specific objectives | Contents | Content coverage | |
| * Introduce reliability and explain its in measurement * Introduce different methods of estimating reliability * Compute reliability coefficient using different methods * Explore relationship between reliability and validity * Elaborate the concept and use of standard error of measurement * Compute standard error of measurement | 2.1 Reliability  2.2 Methods of estimating reliability with computation  2.2.1 Measuring stability  2.2.2 Measuring equivalency  2.2.3 Measuring internal consistency  2.2.4 Measuring Inter-rater consistency   * 1. Interpreting reliability coefficients   2. Factors influencing reliability measures   3. Standard error of measurement | * 1. Concept of reliability and use of reliability in testing.   2. Estimating reliability coefficient of the test and interpreting the result using test-retest, parallel forms, and internal consistency (split-half, Kuder-Richardson). Determining and interpreting consistency in scoring between scorer and within scorer.   3. General interpretation using Garret’s criterion, aspects to be considered while interpreting the coefficients (purpose of test, types of test, nature of variables, nature of groups, length of test, difficulty level of test, scoring reliability of test, and other obstacles).   4. Influencing factors (test, examinee, administration and scoring related).   5. Concept and estimation of standard error of measurement using classical concept and statistical computation, relation with reliability, finding standard error using raw score, showing error using normal curve. | |
| **Teaching Learning Strategies** | | | |
| Teacher's Inputs (10 hrs.) | Students’ Efforts (20hrs.) | | Tasks for assignment |
| * Introduce concept of reliability, it’s and use in testing and measurement, share ideas on computing reliability coefficient using different methods. * Provide text for study and give ideas to estimate standard error of measurement and interpret standard error using normal curve. * Give guideline for required tasks. Allocate tasks, supervise students’ activities, judge the task and provide feed-back. | * Actively participate in the class activities, study prescribed related texts, compute reliability and standard error of measurement, * Be oriented to the required task. * Accomplish required task according to provided guidelines. Present the result of task in class. Get feed-back form colleagues and teacher. | | * Construct and administer objective test in a group of students and compute and interpret reliability. |
| **Unit III: Test Validation (10 hrs.)** | | | |
| Specific Objectives | Contents | Content coverage | |
| * Clarify the concept of validity and validity consideration * Elaborate the need of validity in measurement and evaluation * Explain the major considerations in validation * Compute and interpret validity coefficients. * Explain the factors influencing validity. | 3.1 Validity  3.2 Major considerations in validation  3.2.1 Content consideration  3.2.2 Construct consideration  3.2.3 Test-criterion relationships  3.2.4 Consideration of consequences  3.3 Interpreting validity coefficients  3.4 Factors influencing validity  3.5 Relation between test reliability and validity | 1. Concept of validity and validity consideration, need and use of validity in measurement and evaluation. 2. Concept and procedure of estimation of validity using content, construct, criterion, and consequences consideration. 3. Interpretation of validity (logical and statistical) 4. Key factors influencing validity (test related factors, administration related, student related, context related) 5. Relation between reliability and validity in terms of meaning, purpose, focus, method, statistical relation, variance relation. | |
| **Teaching Learning Strategies** | | | |
| Teacher's Inputs’ (8 hrs.) | Students' Efforts (16 hrs.) | Tasks for assignment | |
| * Sharing ideas on the contents, provide resources and opportunity of computing validity, provide guidelines for the tasks, supervise, evaluate, and provide feed-back. | * Actively participate in class, be oriented and select the task, act the selected task, prepare report, present the task and get feed-back from colleagues and teacher. | * Prepare a reflective report including all the processes of test validation. | |
| **Unit IV: Achievement Test Construction (10 hrs.)** | | | |
| Specific Objectives | Contents | Content coverage | |
| * Elaborate concept and use of achievement test. * Preparation of specification greed using blooms’ and Kortholts’ taxonomy. * Write different types of test items and prepare scoring rubrics and answer key. * Organize of test items. * Administer prepared test * Identify P value, D value and power of distractor of the items. * Prepare chart of P and D value and interpret the chart. * Prepare result sheet. * Analyze and interpret test result. * Elaborate formative and summative use of test result. | * 1. Achievement test   2. Answer writing art   3. Test specification   4. Item writing   5. Test administration   6. Scoring and item analysis   7. Result analysis   8. Use of test result | * 1. Concept and use of achievement test   2. Style of responding questions   3. Preparation of specification grid using modified Blooms’ taxonomy.   4. Objective test (multiple choice items including higher levels questions with answer key). Subjective items (Short- for measuring knowledge to evaluation level; long- for measuring understanding, interpretive, critical, reflective, problem solving, analytical, and creative abilities with scoring rubrics).   5. Administration of the test (Test environment, management, invigilation, ethical aspects).   6. Scoring of test papers using scoring key and rubrics, making result sheet, doing item analysis (difficulty level, discrimination index, and distractor/foil analysis).   7. Analysis of result- using bar diagram, histogram, pie-chart, mean, median, mode, percentile rank, standard deviation.   8. Use of result: Diagnostic, formative and summative. | |
| **Teaching Learning Strategies** | | | |
| Teachers Input (10 hrs.) | Students Efforts (20 hrs.) | Tasks for assignment | |
| * This unit is focused on practical activities. Present the concept and use of achievement test. * Provide ideas and models of specification chart using blooms’ and Kortholts’ taxonomy. Provide ideas and examples for writing different types of test items and rubrics and answer key. Provide guideline for organizing test items, administering and scoring the test. * Instruct about item analysis, develop item analysis chart, prepare result sheet, analyze result and use of result. Allocate task, supervise the task, judge the task, and provide feedback. | * Take part in classroom discussion to develop conceptual clearance about the content. * Study the resources. Be oriented for required task. * Prepare a specification chart of any subject of major or core areas of secondary level using Blooms’ or Kortholts’ taxonomy. Write test items according to specification chart (at list short answer type 5, long answer type 5, multiple choice 10), organize and arrange the items, administrate the test visiting school, score the test, analyze the test items, identify P value, D value and power of distractor of the items, prepare chart of P and D value and interpret the chart. * Prepare result sheet, interpret result using graph and pie chart, interpret further the use of the test result. * Write a reflective report including accomplished tasks. | * Construct an achievement test collectively following the steps of test construction process. | |
| **Unit V Standardization of Test (10 hrs.)** | | | |
| Specific Objectives | Contents | Content coverage | |
| * Explain the concept, characteristics and uses of standardized test * Explain the process of test standardization * Introduce intelligence, personality, and aptitude * Construct test items for testing intelligence, personality, and aptitude * Critically analyze role and function of National Examination Board and National Assessment of Student. * Analyze the process of schools’ performance evaluation. | * 1. Introduction of standardization of test   2. Process of standardization of test   3. Testing intelligence, personality, attitude, and aptitude   4. Measuring complex achievement (interpretive exercise)   5. Performance-based assessment of students.   6. Performance evaluation of schools | * 1. Concept, characteristics, and uses of standardized test.   2. Standardization process (Planning, preparing the preliminary format, administration of the test, item analysis, determine reliability and validity, preparing final form, determining norms (raw scores, age norms, grade norm, percentile norms and standard scores), preparing test manual.   3. Concept and use of intelligence, personality, attitude and aptitude test. Construction of test items for measuring intelligence, personality, attitude and aptitude.   4. Concept and developing tools for interpretive exercise.   5. Performance based assessment (Concept, types of performance assessment, construction of performance task).   6. Introduction of performance assessment of schools conducted by ERO and review of school performance evaluation form. | |
| **Teaching Learning Strategies** | | | |
| Teacher's Inputs (20 hrs.) | Students’ Efforts (40 hrs.) | Tasks for assignment | |
| * Class presentation for clarifying the concept, characteristics, uses and process of test standardization. * Introduce intelligence, personality, and aptitude test. Provide guidelines and task for constructing test items for testing intelligence, personality, and aptitude. * Provide task for analyzing the role and function of National Examination Board and National Assessment of Student and the process of schools’ performance evaluation. * Provide opportunity of presenting the accomplished task in class. Judge the task and provide feed-back. | * Search reading materials in websites, study the searched materials, discuss on the concept, characteristics, uses, and the process of test standardization. * Construct test items for measuring intelligence, personality, and aptitude (at list five items for each psychological construct). Analyze the test items used by National Examination Board and National Assessment of Students Achievement. * Analyze the performance assessment tools developed by ERO. * Review a book or book chapter or a journal article or write an article based on the accomplished tasks. | * The students will review one published standardized test and write a summary report. | |

1. **Evaluation Criteria:** (internal 40%, external 60%)

Students’ learning will be evaluated based on 40 % internal assessment and 60% external examination. Evaluation criteria will be as explained below.

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| **Criteria** | **Marks** | **Remarks** |
| **Internal assessment:** The internal 40% will focus on formative as well as summative nature which includes following activities with respective weightages. | | |
| Attendance | 5 | 70-80=3, 81-90=4, 91-100=5 |
| Class participation | 5 | Student will participate in dramatic informal pair presentation to the assigned content related topic. |
| Assignment I  (Individual task) | 10 | Any one task from the following:  **Task 1:** The students will review a book, book chapter, research report, thesis, journal article, commissions’ report, education rules and regulation, evaluation guidelines, CAS, flash reports and so on. The review work will be based on any content area of the whole course. They will prepare a review report in about 500 words.  **Task 2:** The students will prepare a reflective report including all the processes of test validation based on the content area of unit III.  **Task 3:** The students will review one published standardized test (e. g. IELTS, TOEFL, GRE, SAT, GMAT, test developed by NASA and other standardized tests) and write a summary report. This task will be based on the content area of unit V. |
| Assignment II  (Group task) | 10 | Any one task from the following:  **Task 1:** Students will collectively construct an achievement test (including all types of test items) specifying the detail activities and steps studied in Unit 4.  **Task 2:** Construct and administer an objective test (including multiple-choice, true-false, fill in the blanks items) in a group of students and compute and interpret reliability. |
| Assignment III  (Individual test) | 10 | Written examination: Objective and subjective items |
| **External evaluation:** The external 60% written test covers the following nature of test items. | | |
| External  Examination | 60 | Group A: Objective items (10× 1) = 10  Group B: Short answer type items (6× 5) = 30 (including two or questions)  Group C: Essay type items (10× 2) = 20 (including one or question) |

1. **Recommended Books and References**

Ebel, R. L. & Frisbie, D. A. (1991). *Essentials of Educational Measurement* (5th ed.). New Delhi: Prentice-Hall of India Pvt. Ltd. (For unit II, III, IV)

Education Review Office (latest report). *Report on National Assessment of Student Achievement*. Government of Nepal, Ministry of education. Bhaktapur, Education Review Office.(For unit I)

Freeman, Frank S. (1965). *Psychological testing*. New Delhi: Oxford and IBH Publishing Company (For unit V)

Gregory, Robert J. (2005). *Psychological testing: History, principles, and applications*. Delhi: Pearson Education Pte. Ltd. (For unit II, III, IV and V)

Gronlund, Norman E. (1995). How to write and use instructional objectives. U.S. A.: Prentice Hall Inc. (For unit IV)

Kaplan, Robert M. & Saccuzzo, Dennis, P. (2009). Principles, applications, and issues. India: Cengage Learning India Private Limited. (For unit II, III, and V)

Kubiszyn, Tom, &Borich, Gary. (2004). *Educational testing and measurement: Classroom application and practice*. India: John Wiley & Sons, Inc. (For unit I, IV and V).

Linn, Robert L. & Miller, M. David. (2008), *Measurement and Assessment in Teaching*. India: Pearson Education. (For unit I, II, III, IV)

Sharma, R. A. (2004). *Essentials of Measurement in Education and Psychology*. Meerut: R Lall Book Depot. (For unit V)

Singh, Arun Kumar. (1997). *Tests, measurements, and research methods in behavioural sciences*. India: Bharati Bhawan Publishers and Distributors. (For unit I, II, III, IV).