

|  |  |
| --- | --- |
| **PROGRAM** | **Master of Business Administration** |
| **SEMESTER** | **4** |
| **COURSE TITLE** | **Psychometric Testing** |
| **COURSE CODE** | **04MB0358** |
| **COURSE CREDITS** | **3** |
| **COURSE DURATION** | **42 Hours (42 Sessions of 60 Minutes Each)** |

**COURSE OUTCOMES:**

* Develop understanding about the basics of measurement theory.
* Apply theoretical background for supplementing the understanding of psychological assessment.
* Develop capacity for critical judgment of the adequacy of measures purported to assess behavior in the role of theory development.
* Interpret test profiles and explore patterns in interpretation from several tests.
* Develop a perspective about the intricacies and ethics of use of psychological tests.
* Create scales or use established scales for measuring constructs.

**COURSE CONTENTS:**

|  |  |  |
| --- | --- | --- |
| **Unit No** | **Unit / Subunit** | **Sessions** |
| **I** | **Basics of Measurement Theory**- Measurement in Science, Definition and Meaning of Measurement, Theories of Measurement: Campbell's Theory, Steven's Contribution, **Types of Measurement Scale**: Nominal, Ordinal, Interval, Ratio, Attributes of Measuring Instruments, Application of Measurement Theory to Educational and Psychological Research,  **Problems in Psychological Measurement Errors in Measurement**- What are Errors of Measurement, Sources/Types of Error  **Speed Test versus Power Test** – Speed Test, Power Test, Types and Errors and Speed and Power Tests, Effect of Unattempted Items on Errors of Measurement  Criterion for Parallel Tests – Equality of Means, Variances and Covariances, Calculation of Lmvc, Interpretation of Lmvc, Equality of Variances and Covariances, Calculation of Lvc, Interpretation of Lvc, Equality of Means, Interpretation of Lm, Use of Parallel Tests to Calculate Test Reliability | 9 |
| **II** | **Introduction to Psychological Testing** – Psychological Tests: What are They? Nature and Characteristics of Psychological Tests, History of Psychological Testing, Types of Psychological Tests  **Test Construction** – Test Construction and Standardization, Steps Involved in Test Construction  **Item Analysis** – Introduction: Item Analysis, Item Discrimination, Item Difficulty, Item Validity: Biserial Correlation Method and Point-Biserial Correlation, Role of Item Characteristics Curve in Predicting the Test Scores  **Scoring of Tests and Problems of Scoring** – Scoring of Tests, Problems of Scoring: Time Scoring Problems, Response Prejudice/Bias, Scoring of Rank-Ordered Items, Importance of scoring in psychological testing | 8 |
| **III** | **Reliability** – What is Reliability? Methods of Calculating Reliability: (i) Test-Retest (ii) Parallel Form (iii) Split-Half (iv) Method of Rational Equivalence (v) Cronbach Alpha, Factors Affecting Reliability, Types of Reliability Used in Some Psychological Tests, Importance of Reliability in Psychological Testing  **Validity** – What is Validity? Methods for Calculating Validity, Factors Affecting Validity,  Using Validity Information to Make Prediction, Relationship between Reliability and Validity  **Norms** – The Concept of Norms: Definition and Nature, Types and Methods of Calculating Norms, Difference between Norms and Standards, Types of Norms Used by Some Psychological Tests | 6 |
| **IV** | **Applications of Psychological Testing in Educational Setting** - Psychological Testing in the Field of Education, Two Practical Demonstrations with Scores, and Interpretation: Career Interest Inventory and Standard Progressive Matrices (SPM), Directory of Major Tests Used in the Educational Field: Foreign Test and Indian Tests  **Applications of Psychological Testing in Counselling and Guidance** - Psychological Testing for Better Health, Adjustment and Counselling. Two Practical Demonstrations of Tests with Scores and Interpretation: Dimensions of Temperament Scale (DTS) and Family Environment Scale (FES)  **Applications of Psychological Testing in Organisational Setting** - Two Practical Demonstrations with Scores and Interpretations: Myres-Briggs Type Indicator (MBTI) and Emotional Quotient (EQ) Test | 9 |
| **V** | **Ethical Issues in Psychological Testing** – Ethical Considerations in Psychological Testing,  Specific Principles for Psychological Testing: America Psychological Association (APA) Guidelines, Moral and Legal Standards, Inter-Professional Relation, Responsibility Towards Organisations, Promotional Activities  **Basics of Factor Analysis** - Factor Analysis: Introduction, Relationship between Correlation Coefficient and Factor Loadings, Communality, Specificity, Uniqueness, R-Type and Q-Type Factor Analyses, Merits of Factor Analysis, Major Limitations of Factor Analysis, When to Factor Analyse?  **Extraction of Factors by Centroid Method** - The Purpose of Factor Extraction, The Centroid Method of factor extraction, Finding the number of Factors to be extracted: Fruckter Formula, Eigen Value Index and Residual Correlation Matrix, Rotation of the Reference Axis: Oblique Rotation and Scree Test, Interpretation of Factors.  Applications of Factor Analysis - Applications of Factor Analysis to Various Fields, Theory Development, Test Development, Vocational Psychology, Personnel Selection and Job Performance, Clinical Psychology, Experimental Psychology, A Factor Analytic Study of the Dimensions of Temperament, A Factor Analytic Study of Socio-Economic Status, Frustration and Anxiety | 10 |

**EVALUATION:**

The students will be evaluated on a continuous basis and broadly the scheme given below will be followed:

|  |  |  |
| --- | --- | --- |
|  | **Component** | **Weightage** |
| A | Continuous Evaluation Component (Assignments / Presentations/ Quizzes / Class Participation etc.) | 30% (C.E.C) |
| B | Internal Assessment | 20% (I. A.) |
| C | End-Semester Examination | 50% (External Assessment) |

**SUGGESTED READINGS:**

**Textbooks:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No** | **Author/s** | **Name of the Book** | **Publisher** | **Edition and Year** |
| **T-01** | Narender Kumar Chadha | Applied Psychometry | SAGE Publications India Pvt Ltd | 2009 |
| **T-02** | Anne Anastasi and Susana Urbina | Psychological Testing | Pearson | 1997, 7th Edition |
| **T-03** | Paul Kline | The New Psychometrics: Science, Psychology and Measurement | Routledge | 2000 |

**Reference Books:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No** | **Author/s** | **Name of the Book** | **Publisher** | **Edition and Year** |
| **R-01** | Udai Pareek and Surabhi Purohit | Training Instruments in HRD and OD | SAGE Publications Pvt. Ltd | 2018, 4th Edition |
| **R-02** | D.M. Pestonjee | Third Handbook of Psychological and Social Instruments (In 2 Volumes) | Concept Publishing Company Pvt. Ltd. | 1997 |