Minutes of
the Special Meeting of the Board of Studies of the Department of Physical Education held on 20.11.2014 at 11:00 a.m. in the office of the Chairman, Department of Physical Education, A.M.U., Aligarh.

The following members were present:-

1. Dr. Rajendra Singh  
Chairman,  
Department of Physical Education,  
A.M.U., Aligarh

2. Prof. Ikram Hussain  
Professor,  
Department of Physical Education,  
A.M.U., Aligarh

3. Dr. Brij Bhushan Singh  
Associate Professor,  
Department of Physical Education,  
A.M.U., Aligarh

4. Dr. Zahirullah Khan  
Associate Professor,  
Department of Physical Education,  
A.M.U., Aligarh

5. Dr. Syed Tariq Murtaza  
Assistant Professor,  
Department of Physical Education,  
A.M.U., Aligarh

Item No.1:

Considered the synopsis/topics of the Ph.D. thesis, submitted by the provisionally selected /foreign candidates of Ph.D. course in Physical Education (2014-15) and recommended to the C.A.S.R., Faculty of Social Sciences, for consideration of admission in Ph.D. course (Physical Education) for the session 2014-15. See Appendix-II(A) & I(B) (List not to be circulated).

The Chairman thanked to the members and then meeting came to the end.
Appendix: I(B)

DEPARTMENT OF PHYSICAL EDUCATION
FACULTY OF SOCIAL SCIENCES
ALIGARH MUSLIM UNIVERSITY, ALIGARH

COURSE WORK: PH.D. (PHYSICAL EDUCATION)
(SESSION: 2014-15)

Mr. ABDUL KAISSAR

PAPER-I
RESEARCH METHODS

UNIT-I
- Critical review of different research designs, understanding in sports sciences.
- Critical understanding of the principles elements of applied research according to various designs as well as specific research methods.

UNIT-II
- Critical understanding and appreciation of the philosophical, ethical issues, coping weight, responsibilities of scholars which underpin research and how this affects research design.

UNIT-III
- Understand and evaluate the problems involved in the design and administration of research studies.
- Conceptualization and appropriate measurements of research phenomena.
- To measure phenomena appropriately in accordance with research design.

UNIT-IV
- Research resources and library databases.
- Design and implementation.
- Literature reviews and questions.
- Research proposals and presentations.

UNIT-V
- Data analysis: including chi-square, t-tests and non parametric equivalents, ANOVA (including repeated measure ANOVA), and non parametric equivalents linear regression and correlation;
- To choose an appropriate methods of analysis to apply to a set a data to answer a research question.
- Understanding of statistical tests for comparison of two groups for continuous and categorical data, as well as tests for comparisons of more than one group for independent samples and repeated measures data.

References:
1) Vasarvaraj Vastrod, Methodology of Research in Physical Education and Sports Science, 888737.
4) John Weimer, Research Technique of Human Engineering, 887429.
Introduction
1.1 Exercise Physiology, its need and scope in the field of sports.
1.2 New Trends in Exercise Physiology Research.
1.3 Experimental designs in Exercise physiology.

Unit-II
2.1 Endocrine Glands and their Hormones.
2.2 Hormones- Nature and Chemical Classification.
2.3 Hormonal Effects on various body functions.
2.4 Endocrine Response to Exercise.

Unit-III
3.1 Physiological base of Strength.
3.2 Training means and methods for strength development.
3.3 Physiological base of Speed.
3.4 Training means and methods for speed development.
3.5 Physiological base of Endurance.
3.6 Training means and methods for Endurance development.

Unit-IV
4.1 Test, Measurement and Evaluation.
4.2 Norm and criterion referenced standards.
4.3 Testing procedures for Hormonal estimation.

Unit V
Research Reviews
5.1 Importance of Literature Review in Research.
5.2 Searching of print and non print documents -- books, journals CD, DVD, E-books, E-journals.
5.3 Review on selected variables of the study.
5.4 Abstract preparation of a study.
5.5 Construction of a research article.

References:
2) Jack H. Wilmore, David L. Costill, “Physiology of Sport and Exercise”.
PAPER-I
RESEARCH METHODS

UNIT-I
- Critical review of different research designs, understanding in sports sciences.
- Critical understanding of the principles elements of applied research according to various designs as well as specific research methods.

UNIT-II
- Critical understanding and appreciation of the philosophical, ethical issues, coping weight, responsibilities of scholars which underpin research and how this affects research design.

UNIT-III
- Understand and evaluate the problems involved in the design and administration of research studies.
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UNIT-IV
- Research resources and library databases.
- Design and implementation.
- Literature reviews and questions.
- Research proposals and presentations.

UNIT-V
- Data analysis: including chi-square, t-tests and non-parametric equivalents, ANOVA (including repeated measure ANOVA), and non-parametric equivalents linear regression and correlation;
- To choose an appropriate methods of analysis to apply to a set a data to answer a research question.
- Understanding of statistical tests for comparison of two groups for continuous and categorical data, as well as tests for comparisons of more than one group for independent samples and repeated measures data.

References:
1) Vasarvaraj Vastrod, Methodology of Research in Physical Education and Sports Science, 888737.
4) John Weimer, Research Technique of Human Engineering, 887429.
PAPER-I

RESEARCH METHODS

UNIT-I
- Critical review of different research designs, understanding in sports sciences.
- Critical understanding of the principles elements of applied research according to various designs as well as specific research methods.

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- Critical understanding and appreciation of the philosophical, ethical issues, coping weight, responsibilities of scholars which underpin research and how this affects research design.

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- Understand and evaluate the problems involved in the design and administration of research studies,
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UNIT-IV
- Research resources and library databases.
- Design and implementation.
- Literature reviews and questions.
- Research proposals and presentations.

UNIT-V
- Data analysis: including chi-square, t-tests and non parametric equivalents, ANOVA (including repeated measure ANOVA), and non parametric equivalents linear regression and correlation;
- To choose an appropriate methods of analysis to apply to a set a data to answer a research question.
- Understanding of statistical tests for comparison of two groups for continuous and categorical data, as well as tests for comparisons of more than one group for independent samples and repeated measures data.

References:
1) Vasarvaraj Vastrod, Methodology of Research in Physical Education and Sports Science, 888737.
4) John Weimer, Research Technique of Human Engineering, 887429.
Paper-II
SPORTS BIOMECHANICS

Unit-I
1.1 Understanding of the current research literature in sports biomechanics, the fundamental, scientific and principles underling the research.
1.2 Knowledge of research in the field of sports biomechanics.
1.3 Current research in biomechanics and its application.

Unit-II
2.1 Critical analysis of current research papers from across the sub-disciplines of biomechanics as they relate to sports biomechanics.
2.2 To understand the working and limitations of biomechanical equipments used for data acquisition and reduction.

Unit-III
3.1 Newton’s laws of motion as applicable to sports motion.
3.2 Segmental and kinematic analysis.
3.3 Understanding the techniques used in 2D and 3D (dimensional) video analysis.

Unit-IV
4.1 Biomechanical Analysis of movement:
   (a) Kinematic Analysis Techniques.
   (b) Kinetic Analysis Techniques.
4.2 Analysis of movements using different software.
4.3 Understanding of equipments and tools used for biomechanical analysis: cameras, markers, dynamometer, etc.

Unit V
5.1 Collection of video data in lab and field situations.
5.2 Types of services in volleyball and their video motion analysis.
5.3 Modeling of different phases in volleyball services.
PAPER-I

RESEARCH METHODS

UNIT-I

- Critical review of different research designs, understanding in sports sciences.
- Critical understanding of the principles elements of applied research according to various designs as well as specific research methods.

UNIT-II

- Critical understanding and appreciation of the philosophical, ethical issues, coping weight, responsibilities of scholars which underpin research and how this affects research design.

UNIT-III

- Understand and evaluate the problems involved in the design and administration of research studies.
- Conceptualization and appropriate measurements of research phenomena.
- To measure phenomena appropriately in accordance with research design.

UNIT-IV

- Research resources and library databases.
- Design and implementation.
- Literature reviews and questions.
- Research proposals and presentations.

UNIT-V

- Data analysis : including chi-square, t-tests and non parametric equivalents, ANOVA (including repeated measure ANOVA), and non parametric equivalents linear regression and correlation;
- To choose an appropriate methods of analysis to apply to a set a data to answer a research question.
- Understanding of statistical tests for comparison of two groups for continuous and categorical data, as well as tests for comparisons of more than one group for independent samples and repeated measures data.

References:
1) Vasarvaraj Vastrod, Methodology of Research in Physical Education and Sports Science, 888737.
4) John Weimer, Research Technique of Human Engineering, 887429.
DEPARTMENT OF PHYSICAL EDUCATION  
FACULTY OF SOCIAL SCIENCES  
ALIGARH MUSLIM UNIVERSITY, ALIGARH  
COURSE WORK: PH.D. (PHYSICAL EDUCATION)  
(SESSION: 2014-15)  

Mr. GHOLAMHOSSEIN YENGIMOLKI  

Paper-II  
SPORTS MEDICINE  

Unit-I  
1.1 Sports Medicine – Need, Scope and Importance in Physical Education and Sports. 
1.3 Anatomy of Human Body – Skeletal system (Back Upper, Middle & Lower). 
1.4 Muscle System – (Back Upper, Middle & Lower). 

Unit-II  
2.1 Nature of Sports injuries. 
2.2 Back Pain: Specific and Non Specific. 
2.3 Lower Thoracic, Lumber Spine Injuries. 
2.4 Posture, Muscle Imbalances, Body Imbalances. 

Unit-III  
3.1 Concept of Rehabilitation and Healing. 
3.2 Specific Rehabilitation Applications (Lumber and Sacroiliac). 
3.3 Therapeutic Exercises: Parameter and Techniques. 
3.4 Aquatic Therapeutic Exercises. 
3.5 Hydrotherapy – Importance, Scope, Types and Principles. 

Unit-IV  
4.1 Test, Measurement and Evaluation. 
4.2 Laboratory Manual of Therapeutic Modalities. 
4.3 Measurement of back pain intensity. 

Unit V  
5.1 Importance of literature Review in Research. 
5.2 Searching of print and non print documents – Books, Journals, CD, DVD, E-Journals, E-books. 
5.3 Review on Selected Variables of the study. 
5.4 Abstract preparation of the study. 
5.5 Construction of a Research Article. 

References:  
3) J.P. Sharma, “Human Anatomy and Physiology”. 
5) Ehrman, Goldan, “Clinical Exercise Physiology”. 
6) Anatomica (the complete home medical reference). 
7) Gray, Gray’s Anatomy”. 

[Appendix-I(B), B.O.S. held on 20.11.2014] ITEM-No. 01
Appendix-VII(b)

Department of Physical Education Education
Faculty of Social Science
Aligarh Muslim Universitry, Aligarh

Ph.D (Physical Education) for the session 2015-16
Course Work: Paper-II

Mr. Raof Ahmad Bhat
M.M.: 60
Int. Assessment: 40
Time : 2:00 Hrs.

Title: Mathematical Modelling in Cricket

Unit–I
Cricket:
1.1 Introduction and history of limited over's international cricket.
1.2 International structure.
1.3 Members of ICC: Full Members, Associate Members & Affiliate Members.

Unit–II
Headway -Start (Handicapping) in sports:
2.1 Understanding the handicapping system.
2.2 Headway -Start (Handicapping) in golf.
2.3 Headway- start in tennis
2.4 Concept of Headway-start in cricket

Unit–III
Ranking and Rating methods in cricket:
3.1 Concept of Ranking and Rating.
3.2 Ranking system for Players in Cricket
3.3 Ranking system for teams in Cricket.

Unit–IV
Mathematical Modelling:
4.1 Concept of Mathematical Modelling.
4.2 Classification of Mathematical Modelling.
4.3 Significance of Mathematical Modelling.
4.4 Application of Mathematical Modelling

Unit–V
Regression Analysis and Developing Regression Models:
5.1 Linear Regression.
5.2 Multivariate Regression.
5.3 Procedure for Developing the Regression Equation with Two Independent Variables.
5.4 Developing a Multiple Regression Model.

References:
7) Trapp.J, Chair of Handicapping and rankings Sub- Committee, 5 July 2005
Title: Physiology of Sports

Unit-I
Introduction:
1.1 Exercise physiology, its need and scope in the field of Physical Education.
1.2 New trends in Exercise Physiology Research.
1.3 Human Physiology and sports performance.
1.4 Sports Psychology.

Unit-II
Physical aspects of the study:
2.1 Exercise and training for health and fitness.
2.2 Body types.
2.3 History of anthropometric.
2.4 Body proportionality differences in athletes.
2.5 Differences in various physical aspects of different level of athlete.

Unit-III
Psychological aspects of the study:
3.1 Attitude and sports performance.
3.2 Locus of control.
3.3 Psychological consideration during competition.
3.4 Assessment of psychological parameters.
3.5 Psychological preparation of sprinters and hurdlers at different levels.

Unit-IV
Testing manuals:
4.1 Measurement of attitude
4.2 Locus of control and its measurement
4.3 Body proportionality and its measurement
4.4 Somato types and its measurement
4.5 Anthropometric measurement

Research Reviews:
Importance of Review Literature
Searching of print and non print documents-books, journals CD, DVD, e-Books, e-Journals
Review on selected variables of the study.
Construction of Research Article, Abstract Preparation of a study,

Books Recommended:
Arthur C. Guyton, “A textbook of medical physiology”
Larry G Shaver “Essential of exercise physiology” (1989)
Tuttle, E.S.; Physiology
Department of Physical Education Education  
Faculty of Social Science  
Aligarh Muslim University, Aligarh  

Ph.D (Physical Education) for the session 2015-16  
Course Work: Paper-II  

Mr. Deepak Raghav  
M.M.: 60  
Int. Assessment: 40  
Time: 2:00 Hrs.

Title: Yogic Physiology and Performance

Unit–I

1.1 Definition, concept and mis-concept and Philosophy of Yoga.

Unit–II

2.1 Hata Yoga, Asang Yoga, Raja Yoga, Gyan Yoga, Bhakti Yoga.

Unit–III

3.1 Asana and its types, difference between Asana and Exercise, Principle of Asana, Salient features of Asana

Unit–IV

4.1 Pranayam and its types, Difference between Pranayam and deep breathing, role and Bandha in Pranayama, Ratio Purka, Rechaka and Khumba.

Unit–V

5.1 Mudaras and its types, Kriya and its types, role of Kriya in Health and Fitness, effects of Yoga in different body system.

References:
Title: The Biomechanical Model of Sprint Start

Unit – I
1.1 Understanding of the current research literature in sports biomechanics, the fundamental, scientific and principles underlying the research.
1.2 Knowledge of research in the field of sports biomechanics.
1.3 Current research in biomechanics and its application.

Unit – II
2.1 Critical analysis of current research papers from across the sub disciplines of biomechanics as they relate to sports biomechanics.
2.2 To understand the working and limitations of biomechanical equipments used for data acquisition and reduction.

Unit – III
3.1 Newton's laws of motion as applicable to sports motion.
3.2 Segmental analysis. Motion analysis in volleyball serve in 2D
3.3 Understanding the techniques used in 2D (dimensional) video analysis.

Unit – IV
4.1 Biochemical Analysis of movements:
   (a) Kinematic Analysis Techniques.
   (b) Kinetic Analysis Techniques.
4.2 Analysis of movements using different software.
4.3 Understanding of equipments and tools used for biomechanical analysis: cameras, markers, dynamometer, etc.

Unit – V
5.1 Collection of video data in lab and field situations.
5.2 Types of sprint starts and their video motion analysis
5.3 Process of developing Biomechanical Model

References
11) S.K Singh, Biomechanics in sports, 888702
12) Timolny RACR Land, applied Anatomy and biomechanics in sports, 887423
14) Yobu, Sports Biomechanics, 883988
15) Vladimir M. Zalsiorsky, kinematics of Human Motion, 887421
16) Artur E. Champmon, Biomechanics Analysis of fundamental Human movement, 887424.
Title: Science of Sports Training and Conditioning

Unit I
Introduction:
1.1 Definition, meaning & importance of sport training,
1.2 Aim, objective & characteristics sport training,
1.3 Principles of sport training,
1.4 Factors affecting coaching and training

Unit II
Training Load
2.1 Important features of Training Load - Intensity, Density, duration and frequency,
2.2 Principles of training load,
2.3 Adaptation process and conditions of adaptation,
2.4 Over load causes and symptoms, tackling of over load.

Unit III
Speed & Strength:
3.1 Forms of speed & strength,
3.2 Characteristics of speed & Strength,
3.3 Means and Methods of speed & strength training.
3.4 Principles of strength training

Unit IV
Fundamental mechanics of jumping
4.1 The approach, Take off
4.2 The Flight and landing
4.3 Technical training of jumping
4.4 Physical requirements and training methods for improving performance in long jump.

Unit V
Research Reviews
5.1 Importance of literature review in research in physical education.
5.2 Searching of print and non print documents – books, journals CD, DVD, E-books, E-journals etc.
5.3 Review of sports training variables.
5.4 Preparation of a seminar abstract, synopsis and presentation.

References:
5) Beashel & Taylor. The World of Sports Examines
Minutes of
the Special Meeting of the Board of Studies of the Department of Physical Education held on 24.09.2016 at 11:00 a.m. in the office of the Chairperson, Department of Physical Education, A.M.U., Aligarh.

The following members were present:

1. **Prof. Brij Bhushan Singh**  
   Professor & Chairperson,  
   Department of Physical Education  
   A.M.U., Aligarh.

2. **Prof. M.S. Chauhan**  
   **(Co-opted Member)**  
   Department of Physical Education  
   Kurukshetra University, Kurukshetra.

3. **Prof. Bhanu Prakash Singh**  
   **(Assigned Member)**  
   Department of Physics  
   A.M.U. Aligarh.

4. **Prof. Gunjan Dubey**  
   **(Assigned Member)**  
   Department of Education  
   A.M.U. Aligarh.

5. **Prof. Ikram Hussain**  
   Professor  
   Department of Physical Education  
   A.M.U., Aligarh.

6. **Dr. Syed Tariq Murtaza**  
   Associate Professor  
   Department of Physical Education  
   A.M.U., Aligarh.

7. **Dr. Sayed Khurram Nisar**  
   Assistant Professor  
   Department of Physical Education  
   A.M.U., Aligarh.

8. **Dr. Mohd. Arshad Bari**  
   Assistant Professor  
   Department of Physical Education  
   A.M.U., Aligarh.

9. **Dr. Merajuddin Faridi**  
   Assistant Professor  
   Department of Physical Education  
   A.M.U., Aligarh.
Before taking up the item on the agenda Prof. Dr. Ramesh Singh, Chairperson, Department of Physical Education on his own behalf and on behalf of the Board of Studies wrote to Prof. Bhami Prakash Singh, Head, Department of Physical Education, A.M.I. Aligarh and Prof. Gunjan Dubey, Department of Education, A.M.I. Aligarh. Assigned members who were attending the meeting in person, the time and hoped that the Board of Studies would be benefited by their participation in its deliberations.

**Item No.1:**

Considered the synopsis/topics of the Ph.D. thesis, submitted by the provisionally selected /foreign candidates of Ph.D. course in Physical Education (2016-17) and Course work papers/title, recommended to the C.A.S.R., Faculty of Social Sciences, for consideration of admission in Ph.D. course (Physical Education) for the session 2016-17. [See Annexure-I, I (A) & I (B)(i) to I (B)(viii) (List not to be circulated)]

**Item No.2:**

Considered & Recommended the appointment of moderators and Examiners of B.P.Ed (I & III semester) and M.P.Ed. (I & III semester) courses under CBCS system for the session 2016-17. Annexure-II (List not to be circulated).

**Item No.3:**

Considered & Recommended the appointment of moderators and Examiners of Ph.D. Course work courses of the 2015-16 Research Scholars, Annexure-III (List not to be circulated).

**Item No.4:**

Consider & Recommended to the faculty, the name of outside/local resource persons for delivering Extramural Lectures during the session 2016-17. (See-Annexure-IV)

**Item No.5:**

Recommended that the following may be co-opted as members of the Board of Studies of the Department for a period of two year w.e.f. 29.12.2016 in terms of clause 1(b)(ii), chapter-II of the Ordinances (Academics).

1. Prof. Arvind Malik  
   Department of Physical Education  
   Kurukshetra University, Kurukshetra (HR)

2. Prof. Archana Chahal  
   Department of Physical Education  
   Allahabad University, Allahabad (U.P.)

The term of existing members are going to be expired on 28.12.2016 and in order to maintain the quorum of the Board of Studies, these recommendation have been made. Necessary orders may be issued to the members.
Considered & Recommended to the Faculty and Academic Council to accord its approval for the publication of the Bi-annual Journal entitled “PELOGIA- A Research Journal of Physical Education and Allied Sciences” As proposed by the Dr. Merajuddin Faridi, Assistant Professor (See Annexure-V). The Finance Officer will be approached by the Chairperson to sanction necessary grants for the publication and applying ISSN number of the proposed Journal. The subscriptions received from within India and Abroad will be deposited with Finance Officer under the appropriate head of Account specified by the Budget Section.

The meeting came to an end with thanks from Chairperson to all the members.

(Prof. Brij Bhushan Singh)
Chairperson

9/1/2016
UNIT-I

1.1 Critical review of different research designs, understanding in sports sciences.
1.2 Critical understanding of the principles elements of applied research according to various designs as well as specific research methods.

UNIT-II

2.1 Critical understanding and appreciation of the philosophical, ethical issues, coping weight, responsibilities of scholars which underpin research and how this affects research design.

UNIT-III

3.1 Understand and evaluate the problems involved in the design and administration of research studies.
3.2 Conceptualization and appropriate measurements of research phenomena.
3.3 To measure phenomena appropriately in accordance with research design.

UNIT-IV

4.1 Research resources and library databases.
4.2 Design and implementation.
4.3 Literature reviews and questions.
4.4 Research proposals and presentations.

UNIT-V

5.1 Data analysis : including chi-square, t-tests and non parametric equivalents, ANOVA (including repeated measure ANOVA), and non parametric equivalents linear regression and correlation;
5.2 To choose an appropriate methods of analysis to apply to a set a data to answer a research question.
5.3 Understanding of statistical tests for comparison of two groups for continuous and categorical data, as well as tests for comparisons of more than one group for independent samples and repeated measures data.

References:

1) Vasarvaraj Vastrod, Methodology of Research in Physical Education and Sports Science, 888737.
4) John Weimer, Research Technique of Human Engineering, 887429.
Title Paper-II: PSYCHO-PHYSICAL ASPECT OF WRESTLERS (Specialization)

Max. Marks: 100
Sessional Marks: 40
Exam. Marks: 60
Duration: 2:00 Hours

Mr. Dushyant Deshwal

Unit - I

Introduction
1.1 Kinanthropometry, its need, Importance and scope in sports performance.
1.2 New trends in anthropometrical Research.
1.3 Sports Psychology, Its need, Importance and scope in sports performance.
1.4 New trends in psychological research.
1.5 Types of wrestling with their weight categories.

Unit – II

Physical aspects
2.2 structural and functional requirement of wrestlers
2.3 Body composition and sports.
2.4 Body proportionality and sports.
2.5 Somatotype and sports
2.6 Heart rate and its measurement.

Unit- III

Psychological aspects
3.1 Psychological determinants of wrestling.
3.2 Personality and sports.
3.3 Self-confidence and sports.
3.4 Anxiety and sports.
3.5 Psychological aspects of competition.

Unit-IV

Testing manuals
4.1 Determination of Personality Profile.
4.2 Measurement of Competition Anxiety.
4.3 Self-confidence and its measurement.
4.4 Body proportionality and its measurement.
4.5 Determination of Somatotypes.
4.6 Measurement of body composition.
Unit-V

Research reviews
5.1 Importance of Review Literature
5.2 Searching of print and non print documents-books, journals CD,
5.3 DVD, e-Books, e-Journals
5.4 Review on selected variables of the study.
5.5 Construction of Research Article, Abstract Preparation of a study,

Books Recommended:

Arthur C. Guyton, ‘A textbook of medical physiology”
Larry G Shaver(1989) “Essential of exercise physiology” Tuttle, E.S.; Physiology
Edward L. Fox, Richard W. Bowers, Merle L. Foss (1989)“ThePhysiological Basis of Physical Education and Athletics”

National Psychological Corporation (catalogue), www.npcindia .com
Department of Exercise and Nutritional Sciences; San Diego State University,CA. 92182-7251.
U.S.A.


K.K. Verma, Tandons Sports Psychology for Physical Education.
Title Paper-II: STRATEGIC MANAGEMENT (Specialization)

OBJECTIVES:
To learn the major initiatives taken by top management on behalf of human resource and performance in external environments. It entails specifying the organization's mission, vision and objectives, developing policies and plans to understand the analysis and implementation of strategic management.

Max. Marks: 100
Sessional Marks: 40
Exam. Marks: 60
Duration: 2:00 Hours

Mr. SALMAN AHMED KHAN

Unit – I

1. STRATEGY AND PROCESS
1.1 Definition, nature, scope, and importance of strategy management
1.2 Conceptual framework for strategic management.
1.3 Concept of Strategy and the Strategy Formation Process
1.4 Stakeholders in Organization – Vision, Mission and Purpose
1.5 Organizational Goals- Definition, Objectives, Governance and Social responsibility.

Unit – II

2. STRATEGIES
2.1 The generic strategic alternatives – Stability, Expansion and Combination strategies
2.2 Strategy in the Global Environment
2.3 Corporate Strategy
2.4 Vertical Integration-Diversification and Strategic Alliances
2.5 Organizational Capability Profile - Strategic Advantage Profile

Unit – III

3. STRATEGY IMPLEMENTATION & EVALUATION
3.1 Designing organizational structure
3.2 Designing Strategic Control Systems
3.4 Matching structure and control to strategy
3.5 Implementing Strategic change
3.6 Politics, Power and Conflict-Techniques of strategic evaluation.

Unit – IV

4. OTHER STRATEGIC ISSUES
4.1 Managing Technology and Innovation
4.2 Strategic issues for Non Profit organizations.
4.3 New Business Models and strategies for Internet Economy.
5. MATHOD AND TECHNIQUES
5.1 Methods and techniques used for organizational appraisal
5.2 Identification of Critical Success Factors (CSF).
5.3 Structure and systems in strategy implementation.
5.4 Leadership and corporate culture, Values, Ethics and Social responsibility.
5.5 Operational and derived functional plans to implement strategy.
5.6 Strategic control and operational Control.
5.7 Organizational systems and Techniques of strategy evaluation.

REFERENCES:
7. William B. Werther and David B. Chandler, Strategic corporate social responsibility, SagePublications
Title: CURRICULUM DESIGN IN PHYSICAL EDUCATION

Mr. ABDUL MAJEED

Unit 1

1.1 Concept of Curriculum and Curriculum Design.
1.2 Types of Curriculum
1.3 Importance of Curriculum development for the physical education professionals (from school perspectives).
1.4 Principle of Curriculum Design

Unit 2

2.1 Factors affecting Curriculum Design (Reference to Physical Education)
2.2 Models of Curriculum (Ralph Tyler, Hilda Taba)
2.3 The importance of model-based approach in physical education.
2.4 Curriculum models in Physical Education (E.g. Developmental, Humanistic, Fitness, Movement Education, Games, Health Optimizing, Lifetime Games and Sports, Multi-Activity, Outdoor and Adventure Education, Sport Education).

Unit 3

3.1 Transaction of Curriculum (Management of Curriculum)
3.2 Introduction of educational bodies and commissions and their recommendations for Physical Education.
3.3 Approaches to Curriculum construction (Herbartian, Morrison, Evaluation, Management, Integrated)
3.4 Stages of Curriculum development

Unit 4

4.1 Long-term planning of the physical education curriculum
4.2 Medium- and Short-term planning in physical education
4.3 Breadth and balance in the physical education curriculum
4.4 Progression and continuity in physical education between primary and secondary school
Unit 5

5.1 Strategies of Curriculum development
5.2 Implementing the Curriculum
5.3 Monitoring the Curriculum
5.4 Evaluating the Curriculum

Suggested Readings:

4 Ideas for Creating an Elementary Physical Education Curriculum
Posted March 5, 2013 in Curriculum & Instruction Updated August 6, 2015
http://education.cu-portland.edu/blog/Curriculum-instruction/4-ideas-for-creating-an-elementary-physical-education-Curriculum/

Steps in Curriculum design
http://www.wikihow.com/Develop-a-Curriculum
https://prezi.com/7lprhna8ln2/steps-in-Curriculum-design/
http://www.slideshare.net/msmaybelle/Curriculum-organization?from_action=save
http://medicine.osu.edu/education/Documents/Curriculum_design_2010.pdf
PE Curriculum in school

http://www.sparkpe.org/blog/10-ideas-to-improve-your-schools-pe-program


Institutional Strategies for Promoting Physical Activity http://www.nap.edu/read/21802/chapter/8


Fit Kid Fit Future http://www.fitkidsfitfuture.com/

Design of the Physical Education Curriculum


http://dlx.bookzz.org/genesis/628000/f399d36a5171d9b97315d73554d7c944/ as/[Anthony_Laker]_Developing_Personal,_Social_and_Mo(BookZZ.org).pdf
Title Paper-II: **IMPACT OF YOGA ON ACADEMIC AND HEALTH RELATED FITNESS INDICATORS** (Specialization)

Max. Marks: 100  
Sessional Marks: 40  
Exam. Marks: 60  
Duration: 2:00 Hours

**Unit - I**

**Introduction**
1.1 Philosophy of Yoga.  
1.2 Types of Yogic Practices.  
1.3 Yoga for General Well-being.  
1.4 New trends in Yogic Research.

**Unit – II**

**Academic Indicators**
2.1 Learning and factors promoting it  
2.2 I.Q. (Intelligence quotient) associated with academics.  
2.3 Memory and its importance in academics.  
2.4 Quarterly academic Performance and factors affecting it.

**Unit- III**

**Health related fitness Indicators**
3.1 physical aspects of health  
3.2 Cardiorespiratory aspects of health.  
3.3 body compostion and health.  
3.3 Flexibility.

**Unit-IV**

**Testing manuals**
4.1 Measurement of learning.  
4.2 Measurement of I.Q.  
4.3 Measurement of Child Memory.  
4.4 Heart Rate and Vital Capacity measurement.  
4.5 Measurement of Body composition and Flexibility.
Unit-V
Research reviews
5.1 Importance of Review Literature
5.2 Searching of print and non print documents-books, journals CD,
5.3 DVD, e-Books, e-Journals
5.4 Review on selected variables of the study.
5.5 Construction of Research Article, Abstract Preparation of a study,

Books Recommended:

Arthur C. Guyton, ‘A textbook of medical physiology”
Edward L. Fox, Richard W. Bowers, Merle L. Foss (1989)“The Physiological Basis of Physical Education and Athletics”
Larry G Shaver(1989)“Essential of exercise physiology” Tuttle, E.S.; Physiology
National Psychological Corporation (catalogue), www.npcindia.com
K.K. Verma, Tandons Sports Psychology for Physical Education.
Paper-II: Aquatic Training on Physio-Mechanical variables

Max. Marks: 100  
Sessional Marks: 40
Exam. Marks: 60
Duration: 2:00 Hours

Mr. HAMZEH ADNAN GHALEB AL TARAWNEH

UNIT-I
1. Understanding of the current research literature in sports biomechanics, the fundamental, scientific and principles underlying the research.
2. Knowledge of research in the field of sports biomechanics.

UNIT-II
1. Critical analysis of current research papers from across the sub disciplines of biomechanics as they relate to Aquatic Training in physiology and sports biomechanics.
2. To understand the working and limitations of biomechanical equipments used for data acquisition and reduction.

UNIT-III
1. Newton’s laws of motion as applicable to sports motion.
2. Segmental and kinematic analysis.
3. Understanding the techniques used in 2D and 3D (dimensional) video analysis.

UNIT-IV
1. Biochemical Analysis of movements:
(a). Kinematic Analysis Techniques.
(b). Kinetic Analysis Techniques.
2. Analysis of movements using different software.
3. Understanding of equipments and tools used for biomechanical analysis: cameras, force plates, accelerometer, radar gun etc.

UNIT-V

1. Collection of video data in lab and field situations.
2. Analysis of video motion of gait, walking, running
3. Archimedes principle and buoyancy.
4. Types of gaits, Heart and its properties, Aerobic and anaerobic capacity.

References

11. S.K Singh, Biomechanics in sports, 888702
12. Timolny RACR Land, applied Anatomy and biomechanics in sports, 887423
14. Yobu, Sports Biomechanics, 883988
15. Vladimir M. Zalsiorsky, kinematics of Human Motion, 887421
Title Paper-II: **PSYCHOLOGICAL REHABILITATION PROGRAMMS** (Specialization)

OBJECTIVES

1. To understand the role of psychology in the field of psychological sports rehabilitation.
2. To become aware of recent research/trends in sports rehabilitation psychology.

Max. Marks: 100  
Sessional Marks: 40  
Exam. Marks: 60  
Duration: 2:00 Hours

Mr. MALIK NASER ABDULHUSSEIN

Unit – I

1.1 History and current status of Sports Psychology
1.2 Personality Assessment and sports personality
1.3 Attention and perception in sports
   1.3.1 Attention
   1.3.2 Perception
1.4 Concentration training in sports
   1.4.1 Basic principles of concentration
   1.4.2 Concentration training
   c. Concentration awareness exercises
1.5 Motivational orientation in sports
   1.5.1 Athlete’s needs of motivation
   1.5.2 Motivational techniques

Unit – II

2.1 Pre-competitive anxiety
2.2 Aggression in Sports
   2.2.1 Theories of aggression
   2.2.2 Management of aggression
2.3 Role of Psychology in Dealing with Injuries
2.4 Goal setting

Unit – III

3.1 Rehabilitation Psychology: Definition, historical perspective, scope and methods.
3.2 Psychological Approach to Rehabilitation:
   3.2.1 Assessment
   3.2.2 Diagnosis

Unit – IV

4.1 Work settings of rehabilitation in sports psychology
4.2 Designing training programs for rehabilitation sports psychology
4.3 Training needs analysis, implementation of training programs

Unit – V

5.1 Research problems in psychological rehabilitation programs
5.2 Research designs in psychological rehabilitation programs
5.3 Recent trends in research in rehabilitation psychology
References:

4. Basmajian: Biofeedback
5. Sanjiv P. Sahni: Handbook of Sports Psychology – A comprehensive manual of Mental Training
6. Sport Psychology Intervention by Shane M. Murphy, Human Kinetics
9. Coping with Sports Injuries: Psychological Strategies for Rehabilitation by Jane Crossman, Oxford University Press, USA
10. Doing Sport Psychology by Mark B. Anderson, Human Kinetics
11. Clinical sport psychology by Frank L. Gardner, Zella Moore, Zella E. Moore, Human Kinetics
Title Paper-II: Sports Biomechanical and Human GAIT (Specialization)

Max. Marks: 100
Sessional Marks: 40
Exam. Marks: 60
Duration: 2:00 Hours

Mr. HUSSEIN ALI HASAN ALGHAZAL

UNIT I

1. Introduction of the sports Biomechanics
2. Principles of sports Biomechanics
3. Define Gait and its phases
4. Role of Gait pattern in wrestling

UNIT II

1. Current research in GAIT Biomechanics and its application in sports
2. Limitation and Delimitation of the study
3. Critical Analysis of current researches in Gait biomechanics
4. Review of Research and Development in the Subject
   International status
   National Status

UNIT III

1. Significance of the Biomechanical Investigation of Gait Pattern Among Wrestlers
2. Objectives of the study Biomechanical Investigation of Gait Pattern Among Wrestlers
3. To understand limitation of biomechanical equipment used for data acquisition and reduction
4. Newton laws of motion as application to sports motion

UNIT IV

1. Understand the 2D (Dimensional) Video analysis
2. Kinetic analysis of Movement
UNIT V

1. Collection of video data in lab and field situation
2. Data deduction and reduction analysis
3. Process of Kinematical analysis of Gait

REFERENCES:
Annexure: I(B)(viii)

Department of Physical Education
Course Work Ph.D. (Physical Education)
Session (2016-17)
COURSE WORK: PH.D. (PHYSICAL EDUCATION)
(SESSION: 2016-17)

Paper-II : Introduction to Sports Biomechanics: Analysis of Volleyball Serve Patterns
(Specialization)

Max. Marks: 100
Sessional Marks: 40
Exam. Marks: 60
Duration: 2:00 Hours

Mr. ALI AZEEZ ANEED AL-MIJBILEE

UNIT I
1. Introduction of the sports Biomechanics
2. Principles of sports Biomechanics
3. Role of sports Biomechanics in Technical Analysis
4. Current research in Biomechanics and its application

UNIT II
1. Limitation and Delimitation of the study
2. Critical Analysis of current researches in sports biomechanics
3. Review of Research and Development in the Subject
   International status
   National Status
4. Significance of the biomechanical analysis of volleyball serve: correlation between segments motion and ball velocity

UNIT III
1. Objectives of the study biomechanical analysis of volleyball serve: correlation between segments motion and ball velocity
2. To understand limitation of biomechanical equipment used for data acquisition and reduction
3. Joint structure and its fundamental concepts
4. Newton laws of motion as application to sports motion

UNIT IV
1. Understand the 2D (Dimensional) Video analysis
2. Kinetic analysis of Movement
3. Kinematics analysis of movement
4. Analysis of movement using different software
UNIT V

1. Collection of video data in lab and field situation
2. Types of volleyball serve and their video analysis
3. Process of Kinematical analysis of volleyball serve

REFERENCES:
Office of the Chairperson  
Department of Physical Education  
A.M.U., Aligarh

Dated: 18.06.2018

MINUTES of the special meeting of the Board of Studies of the Department of Physical Education held on 28.05.2018 at 10:00 a.m. in the Office of the Chairperson, Department of Physical Education, A.M.U., Aligarh.

The following members were present:-

1. Prof. Brij Bhushan Singh  
   Chairperson  
   Department of Physical Education, A.M.U., Aligarh  
   (In chair)

2. Prof. Bhanu Prakash Singh  
   Assigned Member  
   Department of Physics, AMU, Aligarh

3. Prof. Ikram Hussain  
   Professor of the Department

4. Prof. Zamirullah Khan  
   Professor of the Department

5. Dr. Rajendra Singh  
   Associate Professor of the Department

6. Dr. Sayed Khurram Nisar  
   Assistant Professor of the Department

7. Dr. Mohd. Arshad Bari  
   Assistant Professor of the Department

8. Dr. Merajuddin Faridi  
   Assistant Professor of the Department
Item No.1:

**Considered and Approved** the teaching allocation of B.P.Ed. (I<sup>st</sup> & III<sup>rd</sup> Semester) and M.P.Ed. (I<sup>st</sup> & III<sup>rd</sup> Semester) courses under CBCS system of the Department for the session 2018-19. [See Appendix-I]

The committee further authorized the Chairperson to make any amendment/change in allocation as per the requirement.

Item No.2:

**Considered and Recommended** to the C.A.S.R., Faculty of Social Sciences, the Ph.D. topics and syllabi of Ph.D. course work paper(s) assigned to each research scholars by the Research Advisory Committee of the Department for the session 2017-18. [See Appendix-II]

(Prof. Brij Bhushan Singh)
Chairperson
Chairperson
Dept. of Physical Education
A.M.U., Aligarh
DEPARTMENT OF PHYSICAL EDUCATION
ALIGARH MUSLIM UNIVERSITY, ALIGARH

Ph.D. Course Work Syllabus
Session: 2017-18

Compulsory : Paper-I

Title: Research Methodology, Quantitative Methods and Computer Applications

Credit: 04
Maximum Marks: 100
Sessional Marks: 30
Examination Marks: 70
Duration: 2 ½ Hours

Objective: The main objective of this paper is to impart knowledge about the concepts and applications of research and statistics with its tools in writing the thesis.

Unit-I

Introduction:
1.1 Concepts and Nature of Research, Research Problems, Process of Research,
1.2 Research an aid to Decision Making,
1.3 Fundamental steps in scientific endeavor,
1.4 Research in Functional Areas, Ethical issues,
1.5 The Concept and Nature of Hypothesis, Formulation of Hypothesis, Hypotheses testing.

Unit-II

Statistical Processes:
2.1 Descriptive process, Comparative process, Relationship process,
2.2 Inferential process, Predictive process,

Tools and Techniques of Data collection:
2.3 Sources of data,
2.4 Tools and techniques,
2.5 Primary data, Secondary data, Dependent and independent variables.

Unit-III

Basic Concepts:
3.1 Types of variables: Continuous, discrete and dichotomous variables,
3.3 Concept of correlation; Interpretation of simple, partial and multiple correlations.
3.4 Research Design: Factorial, Correlational and matched group.
3.5 Normal curve
Unit-IV

Measuement of Phenomenon in accordance with Research Design:

Parametric test
4.1 Measures of variability and central tendency, their uses.
4.2 t-test and its types, Z-test,
4.3 ANOVA

Non parametric test
4.4 Chi square,
4.5 Rank order correlation.

Unit-V

Research Proposal and presentations:
5.1 Designing of thesis and abstract, Preperations of research article for publication and presentation
5.2 Types of graphical representation, Guide lines for constructing the graph
5.3 Scaling techniques.

Software for Data Analysis:
5.4 MS-Excel: Spreadsheet preparation/ maintenance, filtering, Administering formulae, Statistical results, Figure/ graphs preparation, Multi-file administration etc.
5.5 SPSS 19.0: Data Administration - Feeding, Import/ Export, Data scaling, Statistical analysis, Handling of Query/output, Validity & reliability.

Books Recommended:
1) Dr. Smt. K.G. Jadhav, Sachin B. Pagare, Sinku Kumar, Research Process in Physical Education & Sport: An Introduction
3) Sherri L. Jackson, Research Methods and Statistics, A critical thinking approach.
5) J. P. Verma, Research Methods and Statistics in Physical Education.

Scales of measurements
https://www.youtube.com/watch?v=KIBZUk39ncI
https://www.youtube.com/watch?v=vJpiUHbLKL

Measures of variability

Types of sampling techniques
Title: Professional Preparation and Transition Issues in Physical Education

Credit : 04
Max. Marks : 100
Sessional : 30
Examination Marks : 70
Duration: 2 ½ Hours

Name of the Research Scholar: Lokesh Raghav

Unit-1
1.1 Concept of transition in teacher training/education.
1.2 Meaning and concept of reality shock.
1.3 Expectation of reality shock and pre-service teacher’s motivation, sense of teaching efficiency?
1.4 Values and Beliefs with the Reality of Teaching

Unit-2
2.1 Employers skills related demands in teacher education (physical education).
2.2 Concept of generic skills
2.3 Basic competency skills: reading, writing, and computing.
2.4 Developing skills: Personal and Professional.
2.5 Strategies for acquiring skills

Unit-3
3.1 Understanding the scenario of burnout in teachers.
3.2 Higher education and graduates employability skills.
3.3 Developing generic skills at university during work placement and in employment.
3.4 The impact of teacher education on beginning physical education teachers’ practices.

Unit-4
4.1 The Education Skills Gap in the 21st Century.
4.2 Career intentions of physical education teachers.
4.3 Teachers’ perceptions of workplace conditions and their professional learning goals.
4.4 Systematic approach to the evaluation of the student experience in work-integrated learning.
Unit-5

Research Reviews:

5.1 Importance of Review Literature
5.2 Searching of print and non-print documents—books, journals CD, DVD, e-Books, e-Journals
5.3 Review on selected variables of the study.
5.4 Construction of Research Article, Abstract Preparation of a study

References:


**********
Title: Psycho-Physiological Aspects of Meditation

Name of Research Scholar: Samiya Husain

UNIT -I

Introduction

1.1 Concept of meditation and its types.
1.2 Meditation in Sufism and other religious cultures.
1.3 Heart based meditation
1.4 Meditative state.
1.5 Demystifying Meditation.

UNIT- II

Autonomic cardio-respiratory functions.

2.1 Heart rate
2.2 Heart rate variability
2.3 ECG.
2.4 Vital capacity
2.5 Breathing frequency

UNIT -III

Psychological indicators

3.1 Attitude.
3.2 Anxiety
3.3 Mood states.
3.4 Self efficacy
UNIT -IV

Training Manuals

4.1 Measurement of autonomic cardio-respiratory function.
4.2 Measurement of Psychological indicators.
4.3 Experimental Designs.

UNIT -V

Research Reviews:

5.1 Importance of Review Literature
5.2 Searching of print and non print documents-books, journals CD,
5.3 DVD, e-Books, e-Journals
5.4 Review on selected variables of the study.
5.5 Construction of Research Article, Abstract Preparation of a study.

Books Recommended:

- Kamlesh D. Patel, Joshua Pollack; The Heartfulness way; Westland publications private limited.
- Arthur C.Guyton,’ A textbook of medical physiology”
- Edward L.Fox,Richard W.Bower,Merle L.Foss(1989)”The Physiological basis of Physical Education and Athletes”
- Larry G. Shaver (1989)”Essential of exercise physiology’tuttle,E.S.;physiology
DEPARTMENT OF PHYSICAL EDUCATION  
(Faculty of Social Sciences)  
A.M.U., ALIGARH  

Ph.D. Course Work Syllabus  
(Session: 2017-2018)  

Specialization: Paper- II  

Title: Autonomic functions and Biochemical parameters with exercise and yoga.  

Credits: 04  
Max. Marks: 100  
Sessional: 30  
Examination Marks: 70  
Duration: 2 ½ Hours  

Name of the Research Scholar: Shubi Mirja  

UNIT-I  

Introduction  
1.1 Exercise physiology and its relevance.  
1.2 New trends in exercise physiology research.  
1.3 Yogic practices.  
1.4 Physical exercises  

UNIT-II  

Specimen collection and preanalytical variables.  
2.1 Blood/Plasma /Serum.  
2.2 Anticoagulant/Antioxidant.  
2.3 Hemolysis.  
2.4 Specimen transport.  

UNIT-III  

Autonomic functions  
3.1 Heart rate  
3.2 Blood pressure.  
3.3 EMG.  
3.4 Vital capacity.  
3.5 Breathing frequency  

UNIT-IV  

Techniques  
4.1 Spectrophotometry.  
4.2 Beers Lambert Law.  
4.3 Fluorescence spectroscopy.  
4.4 Preparation of standard curves.  
4.5 Measurement of Autonomic functions
UNIT -V

Research Reviews:

5.1 Importance of Review Literature
5.2 Searching of print and non print documents-books, journals CD,
5.3 DVD, e-Books, e-Journals
5.4 Review on selected variables of the study.
5.5 Construction of Research Article, Abstract Preparation of a study

Books Recommended:

- Arthur C. Guyton, ’A textbook of medical physiology”
- Edward L. Fox, Richard W. Bower, Merle L. Foss(1989)”The Physiological basis of Physical Education and Athletes”
- Larry G. Shaver (1989)”Essential of exercise physiology”tuttle, E.S.; physiology
- Burtis and Ashwood, Tietz Fundamentals of Clinical Chemistry, 2001
- Fifth Edition.
TITLE: Concept of Socioeconomics, Social Intelligence and Self Efficacy in Sports

Name of Research Scholar: Saif Ali Jaddoa Almanasere

UNIT- I

SOCIO-ECONOMIC

1.1 Concepts, components and characteristics.
1.2 Socialization and acculturation
1.3 Socialization, multi-culturalism, social assimilation and issues associated with socialization.
1.4 Socio economics from family perspective
1.5 Socio economics from educational perspective
1.6 Socio economics from professional perspective
1.7 Socio economics from income perspective

UNIT- II

SOCIAL INTELLIGENCE

2.1 Concepts, components and characteristics.
2.2 Role of Patience in sport
2.3 Role of Cooperativeness in sport
2.4 Role of confidence level in sport
2.5 Role of sensibility in sport
2.6 Role of tactfulness in sport
2.7 Role of sense of humor in sport
2.8 Role of memory in sport

UNIT- III

SELF-EFFICACY

3.1 Concepts, components and characteristics.
3.2 Learning about to gain deep and systematic knowledge in the field of self-efficacy, various strategies for public appearances in sport and effects of applied self-efficacy behaviors.
3.3 Acquire the ability to effectively use selected techniques and strategies for performing in various circumstances in sport and physical education.
3.4 Learning about the effects of self-efficacy on the personality and identity.
3.5 Learning about understanding of the significance of motivation behind people's self-presentation behaviors.
UNIT- IV

RESEARCH APPLICATION RELATED TO THE PROBLEM

4.1 Interpretation – Meaning of Interpretation, Technique of Interpretation.
4.2 Precaution in Interpretation– Interpretation of tables and figures.
4.3 Methods of Data collection
4.4 Schedules and Questionnaires.
4.5 Scaling methods, Reliability and Validity of measuring instruments.

UNIT -V

Research Reviews:

5.1 Importance of Review Literature
5.2 Searching of print and non print documents-books, journals CD,
5.3 DVD, e-Books, e-Journals
5.4 Review on selected variables of the study.
5.5 Construction of Research Article, Abstract Preparation of a study

References:

DEPARTMENT OF PHYSICAL EDUCATION  
(Faculty of Social Sciences)  
A.M.U., ALIGARH  

Ph.D. Course Work Syllabus  
(Session: 2017-2018)  

Specialization: Paper- II  

Title: Gait Analysis: Normal And Pathological Functions  

Credit: 04  
Max. Marks: 100  
Sessional: 30  
Examination Marks: 70  
Duration: 2 ½ Hours  

Name of the Research Scholar: Haq Nawaz Mir  

UNIT I  
1.1 Introduction of Gait analysis  
1.2 Introduction major task of gait  
1.3 Introduction of different phases of gait  
1.4 Role of fat percentage in gait pattern  
1.5 Current research in GAIT Biomechanics and its application.  

UNIT II  
2.1 Effect of Age, Gender, Fat percentage and orthoses.  
2.2 Normal Gait pattern  
2.3 Abnormal Gait pattern  

UNIT III  
3.1 Critical Analysis of current researches in Gait biomechanics  
3.2 Review of Research and Development in the Subject  
   International status National Status  
3.3 Significance of the Biomechanical Investigation of relation of speed variation  
   and body fat percentage on the gait pattern of school children.  
3.4 Objectives of the study Biomechanical Investigation of Gait Pattern Among  
   school children with different speed variations.  
3.5 To understand limitation of biomechanical equipment used for data acquisition  
   and reduction  

UNIT IV  
4.1 Quantitative biomechanical analysis  
4.2 Understand the 2D (Dimensional) Video analysis  
4.3 Kinetic analysis of Movement  
4.4 Kinematics analysis of movement  
4.5 Data collection and Analysis of movement using different software
UNIT -V

Research Reviews:

5.1 Importance of Review Literature
5.2 Searching of print and non print documents-books, journals CD,
5.3 DVD, e-Books, e-Journals
5.4 Review on selected variables of the study.
5.5 Construction of Research Article, Abstract Preparation of a study

REFERENCES:

TITLE: Exercise Physiology

Name of Research Scholar: Mohammed Aiyad Mahmood Alobai

UNIT I

1.1 Introduction of exercise physiology
1.2 Importance of exercise physiology
1.3 The principle of exercise physiology
1.4 Component of physical fitness
1.5 The principle of exercise training

UNIT II

2.1 Effect of Age, Gender, Fate percentage.
2.2 The concept of Aerobic training program
2.3 The principle of aerobic training program
2.4 Component of aerobic training program
2.5 Metabolism, Energy and Basic Energy Systems

UNIT III

3.1 Metabolic Adaptations of Exercise
3.2 Hormonal Regulation of Exercise
3.3 Muscular system and exercise
3.4 Muscle and Insulin Action
3.5 Liver function and exercise

UNIT IV

4.1 Understand the scientific method and discuss the research literature on exercise physiology
4.2 Understanding scientific method and assessments of Muscle, Liver function and insulin sensitivity.
UNIT - V

Research Reviews:

5.1 Importance of Review Literature
5.2 Searching of print and non print documents-books, journals CD,
5.3 DVD, e-Books, e-Journals
5.4 Review on selected variables of the study.
5.5 Construction of Research Article, Abstract Preparation of a study

REFERENCES:

MINUTES

of

the Ordinary meeting of the Board of Studies of the Department of Physical Education held on 12.10.2019 at 12:30 p.m. in the Office of the Chairperson, Department of Physical Education, A.M.U., Aligarh.

The following members were present:

1. Prof. Zamirullah Khan
   Chairperson,
   Department of Physical Education,
   A.M.U., Aligarh

2. Prof. Abhimanyu Singh
   Department of Physical Education
   Banaras Hindu University,
   Varanasi.

3. Prof. A.S. Sajwan
   Department of Sports Biomechanics &
   i/c Director UGC-HRDC (ASC)
   L.N.I.P.E., Gwalior.

4. Prof. Ikram Hussain
   Professor
   Professor of the Department

5. Prof. Brij Bhushan Singh
   Professor of the Department

6. Dr. Rajendra Singh
   Associate Professor of the Department

7. Dr. Merajuddin Faridi
   Assistant Professor of the Department

8. Dr. Sayed Khurram Nisar
   Assistant Professor of the Department

9. Dr. Mohd. Arshad Bari
   Assistant Professor of the Department

10. Dr. Naushad Waheed Ansari
    Assistant Professor of the Department

11. Dr. Fuzail Ahmad
    Assistant Professor of the Department
Item No.1:

Confirmed the previous minutes of the Board of Studies meetings held on 10.05.2019 & 19.08.2019.

Item No.2:

Considered the following Revision/changes in the eligibility criteria for admission to Ph.D. course and Recommended to the C.A.S.R. Faculty of Social Sciences/ Academic Council for approval.

Eligibility: “A candidate will be eligible to apply for admission to Ph.D. programme in Physical Education, if she/he has obtained Master of Physical Education Degree or its equivalent recognized by the University with not less than an aggregate of 55% marks or its equivalent grade (an equivalent overall average grade point wherever grading system is followed), and had also obtained the Bachelor of Physical Education Degree or its equivalent, recognized by the University with not less than an aggregate of 50% marks or its equivalent grade (an equivalent overall average grade wherever grading system is followed)”

Item No.3:

Considered, the Ph.D. topic and syllabi of Ph.D. course work Paper(s) assigned to each research scholars for the session 2018-19 and Recommended to the C.A.S.R. Faculty of Social Sciences [See Appendix-I].

Item No.4:

Considered and approved the proposal of Dr. Fuzail Ahmad, Assistant Professor for organizing Workshop on “Marching Band” during the academic session 2019-20 in the Department [See Appendix-II].

Item No.5:

Considered and Approved the appointment of moderators and examiners of B.P.Ed. (I & III semester), M.P.Ed. (I & III semester) courses under CBCS system for the session 2019-20. The committee further authorized the Chairperson to make alternate examiner if the original examiner does not respond [See Appendix-III: List not to be circulated].

Any Other Item(s):

(a) Considered the appointment of examiners for re-evaluation of Answer Books of Ph.D. Course work examination for the session 2017-18 research scholars and Recommended to the C.A.S.R. Faculty of Social Sciences [See Appendix-IV: list not to be circulated].

(b) Considered & approved the allocation of Supervisors for Dissertation of M.P.Ed. (IV-Semester) Students 2019-20 [See Appendix-V].

(c) Considered & approved the Syllabi of Departmental Test Courses for B.P.Ed. and M.P.Ed. Courses 2020-21 [See Appendix-VI (a) & VI (b)].

(d) Considered and approved the proposal of Dr. Merajuddin Faridi, Assistant Professor for organizing Workshop on “Aerobics” during the academic session 2019-20 in the Department [See Appendix-VII].

(Prof. Zamirullah Khan)
Chairperson
Title: Research Methodology, Quantitative Methods and Computer Applications

Credit: 04
Maximum Marks: 100
Sessional Marks: 30
Examination Marks: 70
Duration: 2 Hours

Objective: The main objective of this paper is to impart knowledge about the concepts and applications of research and statistics with its tools in writing the thesis.

Unit-I

Introduction:
1.1 Concepts and Nature of Research, Research Problems, Process of Research,
1.2 Research an aid to Decision Making,
1.3 Fundamental steps in scientific endeavor,
1.4 Research in Functional Areas, Ethical issues,
1.5 The Concept and Nature of Hypothesis, Formulation of Hypothesis, Hypotheses testing.

Unit-II

Statistical Processes:
2.1 Descriptive process, Comparative process, Relationship process,
2.2 Inferential process, Predictive process,

Tools and Techniques of Data collection:
2.3 Sources of data,
2.4 Tools and techniques,
2.5 Primary data, Secondary data, Dependent and independent variables.

Unit-III

Basic Concepts:
3.1 Types of variables: Continuous, discrete and dichotomous variables,
3.2 Sampling: Purpose of sampling, Sampling Techniques: Advantages and limitations of sampling techniques.
3.3 Concept of correlation; Interpretation of simple, partial and multiple correlations.
3.4 Research Design: Factorial, Correlational and matched group.
3.5 Normal curve
Unit-IV

Measurement of Phenomenon in accordance with Research Design:

**Parametric test**
- 4.1 Measures of variability and central tendency, their uses.
- 4.2 t-test and its types, Z-test,
- 4.3 ANOVA

**Non parametric test**
- 4.4 Chi square,
- 4.5 Rank order correlation.

Unit-V

**Research Proposal and presentations:**
- 5.1 Designing of thesis and abstract, Preperations of research article for publication and presentation
- 5.2 Types of graphical representation, Guide lines for constructing the graph
- 5.3 Scaling techniques.

**Software for Data Analysis:**
- 5.4 MS-Excel: Spreadsheet preparation/maintenance, filtering, Administering formulae, Statistical results, Figure/graphs preparation, Multi-file administration etc.
- 5.5 SPSS 19.0: Data Administration - Feeding, Import/Export, Data scaling, Statistical analysis, Handling of Query/output, Validity & reliability.

**Books Recommended:**
1) Dr. Smt. K.G. Jadhav, Sachin B. Pagare, Sinku Kumar, Research Process in Physical Education & Sport: An Introduction
3) Sherri L. Jackson, Research Methods and Statistics, A critical thinking approach.
5) J. P. Verma, Research Methods and Statistics in Physical Education.

**Scales of measurements**
- [https://www.youtube.com/watch?v=KIBZUk39ncI](https://www.youtube.com/watch?v=KIBZUk39ncI)
- [https://www.youtube.com/watch?v=vJpiUHbLKL](https://www.youtube.com/watch?v=vJpiUHbLKL)

**Measures of variability**

**Types of sampling techniques**
DEPARTMENT OF PHYSICAL EDUCATION  
(Faculty of Social Sciences)  
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PH.D. COURSE WORK SYLLABUS  
SESSION: 2018-2019  

PAPER- II  

TITLE: TIME AND METACOGNITION IN PSYCHOMOTOR LEARNING  

Credits: 04  
Max. Marks: 100  
Sessional: 30  
Examination Marks: 70  
Duration: 2:00 Hours  

Name of Research Scholar: Mr. Danvir Singh  

Unit-1  
1.1 Conceptual and theoretical framework of cognition and metacognition  
1.2 Complex relation between metacognition and cognition  
1.3 Components of metacognition  
1.4 Development process in metacognition  

Unit-2  
2.1 Conscious vs. automatic metacognitive process  
2.2 Age related differences in metacognitive control  
2.3 Metacognition challenges related to learning technologies  
2.4 Design implication for metacognitive tools to support metacognition and self-regulated learning  

Unit -3  
3.1 Relation of time and metacognition  
3.2 Metacognition and control strategies in study time allocation  
3.3 Best time for learning (A critical evaluation)  
3.4 Time and academic achievement  

Unit- 4  
4.1 Metacognition in psychomotor learning  
4.2 The use of metacognition in academic and psychomotor tasks  
4.3 Motor skills test performance and metacognitive prompting  
4.4 Conditions for the acquisition and instruction of metacognition
Unit -5

5.1 Importance of review literature
5.2 Searching of print and non-print documents, books, journals, CD
5.3 DVD, e-books, e-journals
5.4 Review on selected variables of the study
5.5 Construction of research article, abstract preparation of a study

References:


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PH.D. COURSE WORK SYLLABUS  
(SESSION: 2018-2019)  

PAPER- II  

TITLE: CONCEPT OF SPORT MANAGEMENT IMPLEMENTATION AND PLANNING  

Credits: 04  
Max. Marks: 100  
Sessional: 30  
Examination Marks: 70  
Duration: 2:00 Hours  

Name of Research Scholar: Mr. Iftikhar Ahmad Wani  

UNIT- I  

Management Principles  
   a. History of Management Thought  
   b. Basic Principles of Management  
      i. Planning  
      ii. Organizing  
      iii. Directing  
      iv. Controlling  
   c. Developing Mission Statements  
   d. Management Styles  
   e. Managing Sport Organizations  
      ii. History of the Management of Sport Organizations  

Industry History of Sport Management  
Academic History of Sport Management  

UNIT- II  

Intervarsity and Intercollegiate sports  
   a. Governing Bodies (Governance)  
      i. AIU  
      ii. UGC  
      iii. Zone level  
      iv. All India level  

Closer look at the AIU  
   i. Purpose and Goals  
   ii. Organizational Chart  
   iii. Decision making capacity  
   iv. External Factors  
   c. Career Opportunities
UNIT- III
Professional Sport
  a. Differences between Professional and Amateur Athletics
  b. Setting Organizational Goals
    i. Planning Goals
    ii. Short-range to Long-range Goals
    iii. Growth and Expansion
  c. Media and Community Relations
  d. Working within Budgets/Salary Caps
  e. Governing Bodies of Professional Sport
    i. Structure of League Offices
    ii. Roles/Responsibilities
  f. Marketing of Professional Sport
  g. Career Opportunities

UNIT- IV
Facilities Planning
  a. Time Management (Scheduling)
  b. Ergonomic and Safety Issues
    i. Legal Issues
    ii. Fan Satisfaction
    iii. Handicap Accessibility
  c. Event Management
  d. Construction of New Facilities
    ii. Design of the Facility (Multi-purpose?)
  e. Crisis Management
  f. Career Opportunities

UNIT- V
Research Reviews:
  5.1 Importance of Review Literature
  5.2 Searching of print and non print documents-books, journals CD,
  5.3 DVD, e-Books, e-Journals
  5.4 Review on selected variables of the study.
  5.5 Construction of Research Article, Abstract Preparation of a study.

References:
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PH.D. COURSE WORK SYLLABUS  
(SESSION: 2018-2019)  

PAPER- II  

TITLE: SPORTS BIOMECHANICS  

Name of Research Scholar: Ms. Nidhi Rani  

UNIT-I  
2. Research in the field of sports biomechanics.  

UNIT-II  
1. Critical Analysis of Current Research Papers from across the Sub Disciplines of Biomechanics as they relate to Sports Biomechanics.  
2. Knowledge about the working and limitations of Biomechanical Equipment’s used for Data Acquisition and Data Reduction.  
3. Meta-analysis or Research analysis.  

UNIT-III  

Strategy and Tactical Analysis:  
1. Understanding about Strategy and Tactical Analysis.  
2. Types of strategies use in sports.  
3. Tactical Analysis Techniques.
UNIT-IV

Notational and Performance Analysis:

3. Types of performance analysis and their video motion analysis.

UNIT-V

Software Packaging Use for Performance Analysis:

1. Collection of video data in lab and field situations.
2. Analysis of Performance using different software.
3. Knowledge about equipment and Software’s used for biomechanical analysis: cameras, Performasports motion analysis software, etc.
4. Understanding the Techniques used in 2D (dimensional) Video analysis.

References

11. S.K Singh, Biomechanics in sports, 888702
12. Timolny RACR Land, applied Anatomy and biomechanics in sports, 887423
14. Yobu, Sports Biomechanics, 883988
15. Vladimin M. Zalsiorsky, kinematics of Human Motion, 887421