FACULTY OF PHYSICAL EDUCATION

SYLLABUS

FOR

Pre Ph.D. Course in PHYSICAL EDUCATION

Session: 2019-20

GURU NANAK DEV UNIVERSITY
AMRITSAR

Note: (i) Copy rights are reserved.
   Nobody is allowed to print it in any form.
   Defaulters will be prosecuted.

(ii) Subject to change in the syllabi at any time.
   Please visit the University website time to time.
Programme Code: **PEZ**  
Pre-Ph.D. Course in Physical Education  
Department of Physical Education (T)  

**Scheme of Course for Pre Ph.D. Course in Physical Education**  
**Semester-I**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>C/E/I</th>
<th>Course Title</th>
<th>Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td><strong>Core Courses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL-901</td>
<td>C</td>
<td>Research Methodology and Sport Statistics</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>PEL-902</td>
<td>C</td>
<td>Measurement and Evaluation in Human Performance</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>PEL-903</td>
<td>C</td>
<td>Science of Sports Training and Conditioning</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>PEL-904</td>
<td>C</td>
<td>Sport and Exercise Physiology</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td><strong>Interdisciplinary/Optional Course (3 Credits)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course No.</td>
<td>C/E/I</td>
<td>Course Title</td>
<td>Credits</td>
<td>Total Credits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>PEL-905</td>
<td>I</td>
<td>Biomechanics and Human Movements</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>PEL-906</td>
<td>I</td>
<td>Sports Psychology and Mental Toughness</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>PEL-907</td>
<td>I</td>
<td>Sports Sociology and Physical Education</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>PEL-908</td>
<td>I</td>
<td>Sports Management and Administration</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>PEL-909</td>
<td>I</td>
<td>Yoga and Health Education</td>
<td>4</td>
<td>-</td>
</tr>
</tbody>
</table>
PRE-PH.D. COURSE IN PHYSICAL EDUCATION

PEL-901: RESEARCH METHODOLOGY AND SPORT STATISTICS

Credits: 4.0-0.0

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A
Meaning, aims, nature and scope of educational research, Characteristics and prerequisites of educational research, Types of research – Basic, Applied and Action research, Characteristics of a Researcher.

SECTION-B
Meaning of research problem, Formulation of research problem, Location and criteria of selecting a research problem, Limitations and delimitations, Meaning and definition of Hypothesis, Significance of Hypothesis, and Types of Hypothesis.

SECTION-C
SPSS – Basic Introduction, Statistical processes and their application in research, Degree of freedom, Level of significance, Operating system, Classification of Computers.

SECTION – D
Recent Trends in Research:
Indexation (h-index, i10-index, i20-index), Bibliographic Databases and search engines (Scopus, Web of science, Indian Citation Index, Google Scholar, PubMed, Journal citation reports (JCR), Directory of open access journals (DOAJ)), Concept of Citation: Journal Impact factor (Thomson-Reuters), Research Data Repositories (Shodhganga, Researchgate, Zenodo.)

References:

PEL-902: MEASUREMENT AND EVALUATION IN HUMAN PERFORMANCE

Credits - 4
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A
a. Meaning of Measurement and Evaluation
b. Principle, Need and Importance of Measurement and Evaluation in Physical Education
c. Inter-Relationship between Test, Measurement and Evaluation

SECTION-B
a. Selection and construction of tests
b. Criteria of test Selections –Selections authenticity, (Reliability, validity, objective, norms) administrative feasibility and education application.

SECTION-C
a. Classification of tests: Standardized and teacher made tests (Objective and subjective tests)
b. Construction of test: Knowledge tests (Written test) and skill tests.
c. Critical evaluation of tests for Physical fitness, motor fitness and sports skill tests, Anthropometric measurement.

SECTION-D
a. Health related physical fitness
b. Motor fitness tests
c. Test batteries and Sports skill tests.

References:
PRE-PH.D. COURSE IN PHYSICAL EDUCATION

PEL-903: SCIENCE OF SPORTS TRAINING AND CONDITIONING

Credits-4-0-0
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A
Sports Training: Definition, Meaning, Importance, Aims and Objectives.
Characteristics of Sports training,
Principles of Sports training,
Training load

SECTION -B
Psychological/mental training,
Planning: Definition, need, importance and principles
Organization & evaluation of training.

SECTION-C
Skill, technique and Tactics,
Competition, Planning & Preparation,
Organization & evaluation of coaching.

SECTION-D
Physical Fitness Components,
Methods and means of training,
Periodization, Micro, Meso and Macro training plans.

References:
Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A
a. Fuel for muscular work (ATP)
b. Energy of muscular contraction, various changes during muscular contraction
c. Aerobic and anaerobic muscular activity.

SECTION-B
a. Physiological changes due to exercise
b. Effects of exercise/work on various systems of body, cardio respiratory, muscular and thermo-regulatory system.

SECTION-C
a. Effect of conditioning and training: Heart and circulatory training, Respiratory system, Brief discussion on other systems during rest, sub-maximal and maximal work
b. Oxygen debt, forced expiratory volume.

SECTION-D
a. High Altitude Training and Adaptation
b. Doping: Definition, Classes and Methods of Doping, Harmful Effects of Doping

References:


PRE-PH.D. COURSE IN PHYSICAL EDUCATION

PEL-905: BIOMECHANICS AND HUMAN MOVEMENTS

Credits-4-0-0
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A
Distance and displacement (linear and angular), Speed and velocity (linear and angular), Acceleration for linear and angular motion. Relationship for linear and angular, Centrifugal and centripetal forces, Newton's laws of motion as applicable to linear and angular motion.

SECTION-B
Force - Meaning, units of force. Effects of force, Sources of force, Components and Restaurant, Work. Power and energy, Projectiles; (Static momentum and Impulse. Stability (Static and Dynamic), Spin, impact and elasticity.

SECTION-C
Analysis of Fundamental Skills: Walking, Running, Jumping, Throwing, Lifting, Pulling, Pushing, Catching, Climbing Method of one fundamental skill will be taught other skill will be given as assignment.

SECTION-D
Analysis of sports Skill: Athletics. Gymnastics, Swimming, Football, Hockey, Basketball, Volleyball, Cricket & Judo method of one of the sports skill, will be taught Other skill will be given assignment.

References:
1. Basis of Human Motion. 8th Ed, Brown & Bench mark.
5. Hall, Susan .t. Basic Biomechanics. Mosby Year Book
PRE-PHD. COURSE IN PHYSICAL EDUCATION
PEL-906 SPORTS PSYCHOLOGY AND MENTAL TOUGHNESS

Credits-4-0-0

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION – A
Meaning of motor learning, Phases of motor Learning, Factors affecting motor learning, motor development in various
Periods of childhood and adolescence.

SECTION – B
Define competition, Characteristics – pre-competition, and post competition state, Psychological Preparation for competition.

SECTION – C
Concept and meaning of Learning, Types of learning, Plateau its causes and remedial measures, Theories of learning

SECTION – D
Motivation: Meaning and concept of motivation, Types of Motivation, Dynamics of Motivation
Anxiety: Definition, Types of Anxiety, Role of Anxiety in sports, Anxiety Coping techniques

References:

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A
Defining Sport, Sport in a Social Institution, Sport is a Social & Cultural Product, Sport as a Social Phenomenon and Sport as a form of Social Involvement.

SECTION-B
Socialization into Sport, Socialization via Sport and De socialization from Sport, Impact of Sport on Education.

SECTION-C

SECTION-D
Economic Activity associated with Sport, Organizational structure of professional sport, a business Model for professional sport.

References:

PRE-PH.D. COURSE IN PHYSICAL EDUCATION

PEL-908: SPORTS MANAGEMENT AND ADMINISTRATION

Credits-4-0-0
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A
Meaning and concept of human resource in sports, Role of sports professionals in developing human resources in society, Public relations.

SECTION-B
Meaning and changing concepts of leadership in sports, Need and significance of leadership, Leadership traits and types of leadership.

SECTION-C
Management of sports in schools, colleges and Universities, Inter – University, District, State and National levels.

SECTION-D
Basic functions in the process of management: Planning, organizing, Controlling, Staffing and directing for the activity based programme

References:
10. Whitaside, Lynn. Effective Management Techniques for getting things Done (Delhi : Vikas Publication 1971.)
PEL–909: YOGA AND HEALTH EDUCATION

Credits-4-0-0
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A

SECTION–B

SECTION–C
Meaning and Definition, Importance of Health Education, Need and Scope of Health Education, Meaning, Definition and Dimension of Health, Inter-relationship among various dimensions, Factors effecting health.

SECTION–D
Definition, meaning of Fitness & Wellness, Components of wellness, Nutrition – macro & Micronutrients, Role of Nutritional Elements in the Body, Caloric Value of Different Nutrients, Carbohydrates Loading.

References:
1. Rajayoga - Swami Vivekananda - Ramakrishna Ashrama Publications.
5. Ghosh B.N.A Treatise on Preventive & Social Medicine, Calcutta: Scientific.