# Swarnim Gujarat Sports University, Gandhinagar

Established by Government of Gujarat Act No. 22 of 2011

&

Recognized by UGC u/s (2f) of the UGC Act 1956

#### Rules

for

**Master of Philosophy + Doctor of Philosophy** 

in

**Physical Education** 

With effect from July 2015

Sector – 15, Opp: Youth Hostel, Near G-4, Govt. commerce Complex, Gandhinagar -382016

# Master of Philosophy + Doctor of Philosophy in Physical Education

# Rules for Master of Philosophy + Doctor of Philosophy Integrated Programme in Physical Education

#### Rule.1 General:

- 1) The degree of Master of Philosophy + Doctor of Philosophy in Physical Education shall be considered an integrated course after the Master's Degree.
- 2) The students shall follow the rules prescribed by the University from time to time, even if they are not included in these rules. The University has the right to modify, change or add to the rules and regulations which shall be binding on the students.
- 3) The M. Phil. + Ph.D. (Integrated) course in Physical Education Students shall be entirely responsible for any duplication or plagiarism or piracy occurring in the dissertation or thesis. In case any such acts are detected even after the award of the degree, the student shall be held accountable for the irregularity and this may even lead to the cancellation of the degree. The decision of the University in this regard will be final.
- 4) A candidate who has been registered for Ph.D. degree, may on cancellation of his Ph.D. registration, be permitted to register for the M. Phil. + Ph.D. (Integrated) in Physical Education degree programme and submit the research work carried out by him/her for the Ph.D. degree with such modifications as maybe deemed appropriate by the candidate towards the dissertation of the M. Phil. + Ph.D. (Integrated) in Physical Education programme, provided he/she has undertaken the course work for Ph.D.

#### **Rule.2 Conduct:**

The M. Phil. + Ph.D. (Integrated) in Physical Education degree course shall be conducted in a department of the University or at a recognized institution or an approved institution of research or at a college / institution that may be recognized for the purpose by the Board of Governors on the recommendation of the Academic Council.

#### **Rule.3 Eligibility:**

1) A candidate for being eligible for admission to M. Phil. + Ph.D. (Integrated) + Ph.D. (Integrated) in Physical Education programme must have passed the master's degree

- examination in physical education & sports sciences with at least 50% marks (SC/ST 45%) or equivalent grade at the first trial in Swarnim Gujarat Sports University or an examination of any other University recognized as equivalent thereto.
- 2) For foreign candidates (those who have not obtained Master's degree or equivalent degree from Indian Universities), the minimum percentage of marks shall be 50% or equivalent grade in the master's degree or equivalent qualification in the relevant subject.

#### **Rule.4 Reservation:**

Reservation of seats for admission to the M. Phil. + Ph.D. (Integrated) in Physical Education programme shall be as prescribed by the University/Gujarat State Government from time to time. The number of reserved seats in each category shall be worked out based on the overall number of seats in the University/affiliated colleges/institutions and the reserved seats shall be rotated among different departments/institutions after every batch. The unfilled seats in any reserved category shall be allotted to general category students.

#### **Rule.5 Procedure for Admission:**

- 1) The number of seats for M. Phil. + Ph.D. (Integrated) in Physical Education shall be decided in advance and notified on the University website and/or through an advertisement. The University shall also give sufficient publicity to the number of available seats for the M. Phil. + Ph.D. (Integrated) in Physical Education programme for each subject in the faculty.
- 2) Only the pre-determined number of candidates shall be admitted to the M. Phil. + Ph.D. (Integrated) in Physical Education programme on merit.
- 3) The interested candidates shall have to apply for the programme in the prescribed format (given in Form I).
- 4) The candidate shall be provided with a copy of the rules and regulations relating to M. Phil. + Ph.D. (Integrated) in Physical Education
- 5) The admission to the M. Phil. + Ph.D. (Integrated) in Physical Education programme shall be done through an entrance test conducted by the University every year on the last Saturday of the month of July or decided by the Vice Chancellor.
- 6) Those candidates who have cleared tests of UGC (NET/JRF), GSLET and those who have more than 70 percent scoreare exempted from the entrance test.
- 7) The Syllabus for entrance test for the M. Phil. + Ph.D. (Integrated) in Physical Education programme is given in Annexure I.

#### **Structure of the Test**

All those who are not exempted from the entrance test will be required to appear for the entrance test. The format of the entrance test will be similar to that of National Eligibility Test of UGC or CSIR and Gujarat State Level Eligibility Test (SLET).

The format of the test will be as follows:

- i. The paper will consist two sections of total 100 marks. The total duration will be 90 minutes (1.30 hour).
- ii. The first section will test the candidates' reasoning ability, computer skills and general awareness.
- iii. The second section will test the candidates' basic knowledge of the relevant subject.
- iv. The format will be as follows:

Topic		Que.	Marks	Time
G.N. & reasoning		25	25	
Computer skills		25	25	
M.C.Q. on Subject		<u>50</u>	50	
	Total	100	100	1.30 h.

Those who secure more than 50% marks in the aggregate in both parts are eligible for GDPI.

In the entrance test, relaxation of 5% will be given to the students of reserved categories (SC/ST) as per UGC norms.

If enough number of candidates do not qualify in the entrance test, the University may, if deemed fit, relax these conditions on a year-to-year basis.

- 8) If enough number of candidates do not qualify in the entrance test, the University may, if deemedfit, relax these conditions on a year-to-year basis.
- 9) The group discussions and personal interviews shall be conducted separately for each subject by a committee consisting of the head of the department, one or two research supervisors/guides, an outside subject expert, other than the head of the department. The other committee members shall be nominated by the Vice-Chancellor.

Alternatively, the Ph.D. Admission Committee of the concerned subject/faculty may also carry out the procedure of admission for M. Phil. + Ph.D. (Integrated) in Physical Education

- 10) Group discussions and interviews shall be organized by the University for the candidates who qualify in the entrance test and those who are exempted from the entrance test.
- 11) The University shall bring out merit lists of candidates for each subject, based on the performance in the group discussions and personal interviews, for each category.
- 12) Final merit will be prepared on the basis of criteria given below:

- a. 40% weightage of marks secured in entrance test.
- b. 40% weightage will be given to post graduate qualifying examination of respective subject.
- c. 10% weightage will be given at the performance in group discussion & interview.
- d. 10% weightage for the Sports Achievements and medalist sports persons at National Level AIU / School Games / National Federations recognized by Indian Olympic association of different Competitions of Sports and Games. The merits scores will be decided by the admission committee time to time nominated by the Vice Chancellor.
- 13) Admission shall be given based on the above merit. The admitted candidate shall have to pay the prescribed fee within seven days from the date of offer of admission, failing on which the seat shall be allotted to the next candidate on the merit list.
- 14) The date of admission and payment of fees will be considered as the date of registration.

#### **Rule.6 Duration:**

The duration of the M. Phil. + Ph.D. (Integrated) in Physical Education programme shall be of sevenacademic terms/semesters.

#### **Rule.7 Place of the programme:**

The M. Phil. + Ph.D. (Integrated) in Physical Education programme will be conducted at the University Department.

#### **Rule.8 Course:**

- 1) The courses in the various subjects of M. Phil. + Ph.D. (Integrated) in Physical Education degree programme shall be prescribed by the M. Phil. + Ph.D. (Integrated) in Physical Education Committee of the Department in the subject concerned within the broad guidelines given below.
- 2) The duration of M. Phil. + Ph.D. (Integrated) in Physical Education programme will be seven semesters, during which period theory subjects and the dissertation should be completed. The students shall have to earn 24 credit hours (one credit = 15 hours of class room work); 12 credit hours for the theory subjects and 8 credit hours for research work. Therehas been a provision to earn 4(four) add-on credits as mentioned in the syllabus structure. (The students will have to submit evidence for these add on credits at the time of submission of the dissertation). During the first semesters students are required to complete the theory subjects. The student shall identify a research topic and prepare a dissertation and submit the same by the end of the 7<sup>th</sup> semester. In the case of unavoidable circumstances the student may seek an extension for submission of the dissertation. The research work will be submitted in the form of a dissertation.
- 3) There shall be three papers to be covered during the terms for which the Departments/Centers shall arrange the lectures. If a candidate fails to qualify the course work in the first semester or any or all the subjects in the second semester he/she may be allowed to reappear only once in the

examination conducted by the University in the next session. And if the candidate still fails to qualify the exams his/her admission shall stand cancelled without any notice and the candidate will have to apply as a fresh candidate for the programme if so desired.

- 4) The M. Phil. + Ph.D. (Integrated) in Physical Education students shall
  - a. take three courses on advanced topics of the subject and research methodology, including computer skill, to be prescribed by the department concerned;
  - b. submit a dissertation, which may include project work or design work, depending on the nature of research;
  - c. shall attend seminars and tutorials and participate in at least two seminar organized by the Department or any other institution/s for the purpose of discussing new results, developments in the subject/or interpretation of data. He/she shall also be required to participate in at least one seminar pertaining to his/her dissertation in the department.
  - d. Shall publish at least two Research paper in reputed national/ International Journals.
  - e. Shall present at least one Research paper in State/ National level Seminar or Conference.
- 5) The courses in the various subjects in the M. Phil. + Ph.D. (Integrated) in Physical Education programme shall be prescribed by the Board of Studies in the concerned subject with the approval of the respective faculty and in line with the following uniform course structure.

Sr. No.	Course Code	Name of Course	Credits			
M. Phil. +	M. Phil. + Ph.D. (Integrated) Semester – I					
1	CCT - 01	Research Methodology and Statistics	04			
2	ECT - 01	Sports Physiology	04			
		Or				
	ECT - 01	Sports Psychology	04			
		Or				
	ECT - 01	Current Trends and Issues in Physical Education and Sports	04			
Total			08			

Sr. No.	Course Code	Name of Course	Credits			
M. Phil. +	M. Phil. + Ph.D. (Integrated) Semester – II					
3	ECT - 02	Sports Medicine	04			
	Or					
	ECT - 02	Test, Measurement and Evaluation in Physical Education	04			
		&Sports Sciences.				
	Or	Or				
	ECT - 02	Yoga and Physical Fitness	04			
4	CCT - 02	Dissertation	08			
Total 12						
Grant Total 20						
	Hours					

Session	1	2	3	4	5	
Monday	Class room	Teaching of Tw	o courses in Ea	ch Semester:	Each day the 5 <sup>th</sup> hours	
Tuesday	4 (Four) hou	rs for each cou	rse per week		can be used for	
Wednesday	Total Teachi	ng Hours per v	seminar and			
Thursday			presentation etc.			
Friday						
Saturday	Data	Data	Data Collection	tion		
	Collection	Collection	Collection			

Total marks credit and Hours distributions of the M. Phil. + Ph.D. (Integrated) Course

Paper	Subject	Marks	Credits	Hours
Paper - 1	Research Methodology and Statistics in Physical Education	100	4	60
	and Sports Sciences			
Paper – 2	Current Trends and Issues in Physical Education and Sports	100	4	60
	Sciences			
	OR			
	Sports Physiology			
	OR			
	Sports Psychology			
Paper – 3	Test, Measurement and Evaluation in Physical Education and	100	4	60
	Sports Sciences.			
	OR			
	Sports Medicine			
	OR			
	Yoga and Physical Fitness			
Paper - 4	Practical/ Projects/ Lab Experiments/ Field Work/ Seminar/	200	8	120
Practical	Academic activities, etc.			
	Total	500	20	400

The respective department will give the detailed course curriculum, field work, practical, etc., for the concerned subjects.

- 6) The M. Phil. + Ph.D. (Integrated) in Physical Education examination shall consist of above papers and dissertation of total 400 marks.
- 7) After entering into PhD phase the candidates shall be required to show their research work progress at the department during mid-term presentation. The mid-term presentation dates shall be announced by the department after completion of one year time period.
- 8) After completion of two years in the PhD phase the candidates can submit their research work for pre submission presentation anytime but before 3 months. In case candidate feels that the research work cannot be submitted for the pre submission presentation before 3 month of joining the PhD

- phase he/she must apply for one year extension to the University for approval in the RDC well in advance. If a candidate fails to appear in the pre submission presentation on a date announced by the Department, he/she will have to wait for the next RDC.
- 9) After the successful completion of the MPhil with 55% marks and above along with at least grade B, the PhD phase for the candidate will start automatically. Once the result is out the candidate will have to register for the PhD phase. The minimum time limit to complete the PhD program after the M.Phil. Programme is two years and maximum time limit is four years.

#### **Rule.9 Validity period of registration:**

- 1) Irregular attendance in the course work or unsatisfactory performance at the seminars/tutorials, etc., shall disqualify the students of M. Phil. + Ph.D. (Integrated) in Physical Education from further studies. Such students will have to rejoin the course in the following year by paying the regular fee. They are exempted from taking the admission test and they admitted against supernumerary seats.
- 2) The student shall be allowed to submit the dissertation within a maximum period of four years after the declaration of the result of the theory papers of M. Phil. + Ph.D. (Integrated) in Physical Education Degree examination, failing onwhich his/her performance in the theory papers shall be treated as cancelled, provided that the Vice-Chancellor may at his/her discretion, grant a request for extension for a maximum period of one year. But such a request for extension shall under no circumstances be entertained after three years of the declaration of the result of the theory papers examination.

#### **Reg.10 Fees:**

The students declared eligible for admission will be admitted on payment of the fees prescribed by the Board of Governors and revised from time to time. The fee once paid shall not be refunded under any circumstances even if the student withdraws from the programme.

#### **Reg.11 Recognition of Teachers for M. Phil. + Ph.D. (Integrated) Degree:**

- 1) Post Graduate Teachers with the following qualifications and experience shall be eligible to be recognized to teach the theory papers at the M. Phil. + Ph.D. (Integrated) in Physical Education programme in the subject/s of their specialization /subjects taught by them in the Post Graduate level, as also to be guides for dissertation:
  - Teachers holding positions as Professors and Associate Professors in the University Departments in the subject concerned.
  - ii. Assistant Professors in the University Departments/affiliated colleges/recognized institutions/approved institutions holding Ph.D. degree and three years of teaching

- experience in the subject at the PG level and/or those who are recognized Ph.D. guides in the subject.
- iii. Teachers with M. Phil. + Ph.D. (Integrated) in Physical Education degree having five years' teaching experience at post graduate level with three research papers in the subject published in referred journals and in the areas.
- 2) Recognition of teachers exclusively for M. Phil. + Ph.D. (Integrated) in Physical Education theory papers
  - i. Professor/ Associate Professor in the University Department or in recognized institutions / approved institutions / affiliated colleges having research work or recognized merits in their subject or discipline to their credit with at least 5 years'teaching experienceat under graduate and/ or three year teaching experience at post graduate level.
  - ii. Assistant Professors in the University Departments, recognized institutions or approved institutions affiliated colleges with at least 7 years' teaching experience at degree level and/or post graduate level, of which post graduate teaching experience shall not be less than five years.

#### Rule.12 No. of students per guide:

- 1) Normally not more than five M. Phil. + Ph.D. (Integrated) in Physical Education students shall be assigned to any individual teacher for the purpose of guiding their dissertation work. Each teacher shall be normally expected to devote at least two hours per week for each student for preparing the dissertation.
- 2) No teacher shall normally do more than one teaching course per semester. For the purpose of work load, one M. Phil. + Ph.D. (Integrated) in Physical Education lecture will be considered as equivalent to two hours of undergraduate/ PG teaching.

# Rule.13 Constitution of M. Phil. + Ph.D. (Integrated) in Physical Education Committee:

Each Board of Studies shall constitute an M. Phil. + Ph.D. (Integrated) in Physical Education Committee comprising:

- i. Chairman of the Board of Studies in the subject concerned.
- ii. Head of the University Department.
- iii. At least one member from the Department
- iv. Two experts associated with M. Phil. + Ph.D. (Integrated) in Physical Education

  Programme who may not be members of the concerned Board of Studies nominated by

  Vice Chancellor.

The term of office of the members of the Committee shall be coterminous with that of the members of the Board of Studies concerned.

# Rule.14 Duties of M. Phil. + Ph.D. (Integrated) in Physical Education Committee:

The duties and functions of the M. Phil. + Ph.D. (Integrated) in Physical Education Committee will be as under:

- i. To guide the teachers in the selection of topic for dissertation based on project/design work or on other identified areas of research.
- ii. Draw the syllabus for the course work and review them.
- iii. Recommendations to improve the teaching and guidance to M. Phil. + Ph.D. (Integrated) in Physical Education students.
- iv. Recommend names of examiners for M. Phil. + Ph.D. (Integrated) in Physical Education papers as well as dissertation to the University.
- v. In the event of any dispute or need for interpretation of the rules, the decision of the M.Phil. Committee shall be final.

#### **Rule.15** Submission of dissertation:

- 1) The dissertation will be treated as accepted only if the student makes satisfactory progress both in writing the dissertation and the examination thereof.
- 2) In the case of students whose dissertation has been accepted once will not be required to resubmit the dissertation even if he/she is required to reappear in the examinations for theory papers.
- 3) Without submission of the dissertation and its satisfactory evaluation, the M. Phil. + Ph.D. (Integrated) in Physical Education degree shall not be awarded.
- 4) A student who has secured the minimum number of marks required to pass in the theory papers but whose dissertation has not been accepted for award of M. Phil. + Ph.D. (Integrated) in Physical Education degree will be required to resubmit his/her dissertation with necessary modifications as suggested by the evaluator. His/her marks of theory papers will be carried forward. Such a candidate shall not be required to reappear for theory examinations.

#### **Rule.16Standard of Passing:**

1) The evaluation of the M. Phil. + Ph.D. (Integrated) in Physical Education programme will be done on a continuous basis, especially for the course work. 30% of the evaluation shall be internal, based on seminars, quizzes, assignments, field work, practical, etc., as decided by the faculty and the remaining 70% shall be based on the examinations conducted by the University.

- 2) The dissertation will be evaluated by three external evaluator and one internal evaluator (guide) recommended by the M.Phil. Committee.
- 3) The open *viva voce* will be conducted by the Examination committee (at least two evaluators) along with the guide after receiving the evaluation report of the dissertation from the external examiner.
- 4) The standard of passing for the M. Phil. + Ph.D. (Integrated) in Physical Education degree examination shall be
  - i. 200 marks (160 marks for dissertation and 40 marks for *viva voce*)
  - ii. At least 40% marks in each of the papers and 45% of the total marks in the aggregate of the papers and dissertation.
    - a. The marks for the dissertation are 160/200 and will be aggregated counting the external and internal evaluation.
    - b. 40 marks for Viva voce will be marked by Examination Committee.
  - iii. Any student securing less than 45% marks in the aggregate and less than 40% in each paper shall be treated as failed and shall have to repeat the course work and reappear in the examinations in order to secure at least 45% marks in the aggregate.
  - iv. There will be no exemptions from appearing in theory papers irrespective of the background of the students. However, the benefits of normal rules and regulations of the university, for award of grace marks in theory papers shall be applicable as per University rules for examinations.

#### **Rule.17 Award of Class:**

Percentage Marks	CGPA	Letter	Classification of Final Result
	From – to	Grade	
Above 85	8.5 - 10	O+	
70 – 84.99	7.0 – 84.99	O	First Class with Distinction
60 – 69.99	6.0 – 6.99	A	First Class
55 – 59.99	5.5 – 5.99	B+	Higher Second Class
50 – 54.99	5.0 – 5.49	В	Second Class
45 – 49.99	4.5 – 4.99 C Pass Class		Pass Class
Below 45	Below $45 = 0.0$	D	Dropped

#### SWARNIM GUJARAT SPORTS UNIVERSITY, GANDHINAGAR

#### DEPARTMENT OF PHYSICAL EDUCATION

Choice Based Credit System

## COURSE STRUCTURE OF M. PHIL. + PH.D. (INTEGRATED) IN PHYSICAL EDUCATION SEMESTER – I & II PROGRAMME

In force from June – 2013

Regular students can opt M. Phil. + Ph.D. (Integrated) in Physical Education semester I & II programme. There shall be 04 (four) courses and 20 credits in M. Phil. + Ph.D. (Integrated) Physical Education. There will be two courses with eight credits in each semester. Each course is carrying 100 marks. M. Phil. + Ph.D. (Integrated) Physical Education degree consists of 400 marks with 20 credits. Each course requires 4 credits. Whereas, dissertation requires 8 credits. Therehasbeenaprovision to earn 4(four) add-on credits as mentioned in the syllabus structure. (the students will have to submit evidence for these add on credits at the time of submission of the dissertation). These add-on credits are extra credits and will not be counted for passing the examination.

Allocation of Hours for Course To	eaching	04 Credits
Unit – I	12 Hours	
Unit – II	18 Hours	
Unit – III	18 Hours	
Unit – IV	12 Hours	

Total 60 Hours

Allocation of Hours for Dissertation... 08 Credits

Personal Guidance 40 Hours Field work and Report writing 80 Hours

Marks Assigned and its division into External & Internal Examination

Marks of External Examination	70
Marks of Internal Examination	30
	Total 100 Marks

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40 Marks

#### **Design and Structure of Semester End Examination:**

Viva-voce Examination

1.	Scheme of Internal Examination	30 Marks
	Assignment Writing	05 Marks
	Seminar Paper Presentation	05 Marks
	Teaching Work for M. P. Ed/M.P.E. Degree	10 Marks
	Internal Examination	10 Marks
2.	Scheme for External Examination	70 Marks
	Long Question	30 Marks
	Short Question	20 Marks
	Short Notes	20 Marks
3.	Marking Scheme for Dissertation	100 Marks
	Thesis Main Body	160 Marks

At Present only an External Examinershallevaluate the Dissertation by the way of giving marks.

#### **Add on Credits:**

#### **Maximum 8 Credits**

Sr. No.	Add on Activities	Credit
1	Inter Uni. Participation (Any one game)	2
2	Inter College Participation (min. two game)	1
3	National Cadet Corps	1
4	National Service Scheme	1
5	Mountaineering – Advance Camp	2
	Basic Camp	1
6	Officiating – State / National level in any two game	2
7	Six-week certificate course in any applied sports sciences	1
8	National level achievement in any sport or game	2

#### SYLLABUS PRESCRIBED FOR SEMESTER - I

#### M. PHIL. + PH.D. (INTEGRATED) (PHYSICAL EDUCATION)

## CCT - 01: RESEARCH METHODS AND STATISTICS IN PHYSICAL EDUCATION AND SPORTS SCIENCES

In force from June – 2013

[Internal = 30	0 marks]	[External = 70 Marks]
Unit – I	(a)	Meaning Nature Need and Scope of Research in Physical Education Classification of Research-Basic Research, Applied Research and Action
	(b)	Research Difference between fundamental and Action Research. The Problem: Locating the problem and criteria in selecting a problem, statement of the Problem Delimitations and Limitations Literature Search.
Unit – II	(a)	Non-Laboratory studies, Historical Research, Philosophical Studies, Surveys (Questionnaire, Interview), Case study
	(b)	Laboratory Research, Experimental Design- Principles of Experimental enquiry (Myth Carron) Control of Experimental factors, Instrumentation Establishing the Research Laboratory
Unit – III	(a)	Preparation of Research Report, Organization of Thesis Report tables, figures, footnotes and bibliography
	(b)	Introduction to the use of calculators and computers in analysis of data, Available equipments/instruments and their specific uses for research in Physical Education and sport
Unit – IV	(a)	Review of elementary statistical concept, Measures of Central tendency measures of variability scale-Z scale or (Sigma) Scale, T- scale, Hull scale, seven sigma scale
	(b)	Analysis of variance, Need for analysis of variance, One way analysis of variance, Post Hock Test of significance, Analysis of co-variance (No Problem to be given in this area)
Unit – V	(a)	Partial and multiple correlation, Meaning and limitation, Partial correlation multiple correlation (Computation of first-partial correlation and multiple correlation
	(b)	Special correlation and non-parametric Methods Chi-square, Rank-Difference method of correlations, Biserial correlation, Tetrachoric correlation, Phi-coefficient, contingency coefficient
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#### Reference Books:

- 1. Aggarwal J.C. educational Research An Introduction, New Delhi Arya Book Depot, 1966
- 2. Best John Research in education, New Delhi-Prentice Hall of India (Pvt.) Ltd. 1977
- 3. Clarke Dayid H And Clarke H Harrison, Research Process in Physical Education Recreation and Health, Eaglewood Chiffs New Jerney Practice Hall Inc 1984
- 4. Galfo, AsnedJaud Earl, Miller Interpreting Educational Research J.O.W.A.: W.M. Brown Co.
- 5. Moule George J The Science of Educational New Delhi Eurasia Publishing House (PVT.) Ltd. 1973
- 7. Cohen Louis and Marion Lawrence-Research Methods in Education Croans Helm Ltd 2-10 Joh's Road London 1980
- 8. Best John W and Khan V-Research in Education, New Delhi Prentice Hall of India (Pvt) Ltd 1986
- 9. Sharma R.A. Fundamental of Educational Research International
- 10. Bloomers paul and Lundguist E.F. Statistical Methods in Psychology and education Calcutta Oxford Book Co. 1960

- Clarke David Hand Clarke H Harrison research Process in Physical education recreation and Health Eaglewood Chffs New Jeraly Prentice Hall Inc. 1984
- 12. Clarke H H and Clarke D.H. Advanced Statistics with application to Physical education London Preatree hall Inc
- 13. Garret H.E. and Woodworth R.S. Statistics in Psychology and education-Bombay Allief Pacific Co. Ltd. 1966
- 14. Guiford J.P. Fundamental Statistics in Psychology and education New York MC Graw Hill Book Co 1960
- 15. Steel Robert G.D. and Torie manes A Principles and Procedures of Statistics New York; MC Graw Hill Book Co. 1960

#### SYLLABUS PRESCRIBED FOR SEMESTER - I M. PHIL. + PH.D. (INTEGRATED) (PHYSICAL EDUCATION)

ECT -01: Sports Physiology In force from June – 2013

#### [Internal = 30 marks]

[External = 70 Marks]

#### **UNIT I: BIO – ENERGETIC:**

Definition of energy-Biological energy cycle, ATP – aerobic and anaerobic comparison with energy systems- Aerobic and anaerobic during rest and exercise.

Recovery from exercise – the oxygen debt – replenishment of energy stores during recovery. Muscle glycogen synthesis – liver glycogen replenishment- restoration of own stores. Measurement of energy, work and power, definition of efficiency – cycle ergo meter – mechanical and electrical treadmill – step bench.

#### **UNIT-II:**

Skeletal muscle – structure and function. The motor unit and strength gradation. Muscle force – velocity and power.

Nervous control of muscular movement. Basic structure and function of the nerve, neuro-muscular functions. The nervous system and motor skills.

#### UNIT – III:

Pulmonary ventilation – minute ventilation – ventilator mechanics – pressure change. Gas exchange and transport- total oxygen consumption capacity and VO2 max. Blood flow and gas transports – cardiac output during exercise. Circulating mechanics – changes in pressure and resistance during exercise.

Cardio – respiratory control at rest and during exercise.

#### UNIT – IV:

Training effects – factors influencing training effects. Exercise and training for health and fitness – causes and risk factors of cardiovascular diseases – the exercise prescription. Environmental aspects, performance at high altitude, Heat balance, temperature regulation and heat disorder, physiological responses to cold.

#### UNIT - V:

Diet before activity, during activity, following activity, exercise and weight control. Exercise and acid balance: Acid base balance, following heavy exercise. Exercise and endocrine system: Characters and mechanism of hormonal action, Hormonal responses to exercise and training.

Effects of age and gender. Age and athletic performance, age and menstrual – exercise during pregnancy.

#### **Reference Books:**

- 01. Pox, Edward L and Mathews Donal K "The Physiological basis of physical education and athletics, New York: Sander College Publishing 1982.
- 02. Mcardle. Williams D et al: Exercise physiology energy nutrition and human performance, Ed.2. phildelphia, Lea and Febiger 1986.
- 03. Karpouch and Sinning "Physiology of Muscular Activity" W.B.Seunders company, Philadephia, London, Toronto.
- 04. William D. Mcardle, Frank I Katch, Victor L Katch" Exercise Physiology" Lea & Febigenphildelphia.
- 05. A Kapandji "The Physiology of the joints' Churchil Livingston, Edinburgh London melbournce and new york.
- 06. David H Clarke, "Exercise Physiology" Prentice Hall Inc., Englewood cliffs, New Jersuy.
- 07. Morehouse and miller "Physiology and exercise" The C.V. Mosley company.
- 08. Larry O Bhaver" Essential or curricum Physiology" Surjest Publications Post Box. No. 2157, Delhi 110 007. India.

#### SYLLABUS RESCRIBED FOR SEMESTER - I M. PHIL. + PH.D. (INTEGRATED) (PHYSICAL EDUCATION)

ECT -01 : Sports Psychology In force from June – 2013

#### [Internal = 30 marks]

[External = 70 Marks]

#### **UNIT I: The Nature of Learning:**

- a) Motor learning coordination of motion, Theories of learning, Kinesthetic, proprioception and labyrinthine, receptors, reflex action and the automatizing motor skills. Feedback, servomechanism and knowledge of results – reinforcement and readings – retention and forgetting.
- b) Factors and conditions affecting motor learning: speed of perception attention and concentration. The learning curve, imitation and learning self activity and mental practices, trial and continuous revision learning the whole and part learning, autogenic technique, ergogenic effects.

#### **UNIT – II The role of emotion in sports performance:**

- a) Motivation and arousal theories. Patronage and political support in development of sports.
- b) Stress and competition.
- c) Aggression
- d. Anxiety anxiety and all round performance, fears of athletes re indicting anxiety.

#### **UNIT – III: Evaluation of the Superior athlete:**

- a) A. typology of athletic activities based upon their psychological demands.
- b) Psychological preparation of the superior athlete pre, during and post competition.
- c) Model training intellectual training of the athlete social psychological preparation of the athletes conceptualizing automation imaginary.

#### UNIT - IV:

- a) Motivational techniques, Role of motivation in Building confidence, Dedication, prides, Discipline, Motivation during training and competition.
- b) Situational motivation, Forging positive attitudes and relationships, Handling the self motivated athlete, Motivating the self motivated athlete, Motivating the "Problem" Athlete, Handling the "Superstar" Athlete, Motivating girls and women

#### **UNIT – V: Psychological assessment of testing:**

- a. Assessing intelligence
- b. Testing for special aptitude
- c. Personality assessment
- d. Behavioral assessment

#### **REFERENCE BOOKS:**

- 01. L.L.E. William Jack Judy A Blucher, Psychology of Coaching Theory and Application, Subject Publication, Delhi, 1982.
- 02. Morgan William P. Contemporary Readings in Sports Psychology Spring Field, Minois, USA, 1970.
- 03. John D.Lauther: Sports Psychology, Prentice Hall Inc. Englewood.

#### SYLLABUS PRESCRIBED FOR SEMESTER - I

#### M. PHIL. + PH.D. (INTEGRATED) (PHYSICAL EDUCATION)

## ECT -01 : CURRENT TRENDS AND ISSUES IN PHYSICAL EDUCATION & SPORTS SCIENCES

#### In force from June – 2013

#### [Internal = 30 marks]

#### [External = 70 Marks]

#### **Unit** – **I** Current Problems

- a) Students'unrest for appreciation of the society
- b) Discontentment among teachers of Physical Education in General Academic Areas
- c) Examination systems and Physical Education
- d) Displeasureand inattention of Physical Education in School Programme
- e) National Physical Fitness Programme

#### **Unit – II** Special Topics

- 1) Professionalism in Sports
- 2) National Youth Policy
- 3) Sports and Legislations
- 4) Sports and Media
- 5) Women and Sports

#### **Unit – III** Academic Enhancement

- a) Seminars and Conferences in Physical Education & Sports Sciences
- b) Scientific Research in Sports and Physical Education
- c) Text-books and periodicals in Physical Education and Sports Science
- d) Commissions and Committeesfor Physical Education & Sports and their recommendations
- e) Standard Norms & Criteria for the Training College of Physical Education

#### Unit –IV Issues

- 1 Issues dealing with Health and fitness
- 2 Issues dealing with Philosophy and purposes of Physical Education and Sports
- 3 Issues dealing with Profession of Physical Education
- 4 Issues dealing with professionalism and Amateurism
- 5. Issues dealing with Sports coaches and Physical Education teachers

#### **Books Recommended:**

Marionalies Sanborn Betty G Hartman Issues In Physical Education

#### **List Of Reference Books:**

- **1.** Halseyelizabeth "Inquiry And Invention In Physical Education Lea &Febioer Philadelphia" 1964.
- 2. BUCHER CHARLESA DIMENSIONS OF PHYSICAL EDUCATION 2nd Edition THE C.V. MUSBY COMPANY Saint Louis 1974
- 3. Lockhart, Aileens S And Slusher, Howard S Contemporary Reading In Physical Education Third Edition Wm C Brown Company Publishers DubugueLowa 1975
- **4.** Sanbron, MurionAliea&Hariman Betty G Issues In Physical Education 2nd Edition Lea &Febiger, Philadelphia 1970
- 5. Morgan R.E. Concerns And Values In Physical Education G Bell & Sons Ltd London
- 6. Cooper Kenneth H 'The New Acrtries' M.Evans And Company Inc New York 1970
- 7. Zeigler Earbf 'Physical Education And Sports Philosophy Prentice Hall Inc. Englewood Chiffs N.J. 1977

- 8. Miller Donna, MAE & Russell Kuthry R.E., Sport A Contemporary View Lea &Bebiger Philadelphia 1971
- 9. Ogleshy Carole A Women And Sport From Myth To Reality Lea &Febiger Philadelphia 1978
- **10.** GeadelmanPartrcral I Equality In Sport For Women AAPHER PUBLICATION Washington 1977
- **11.** Gerber Ellen W Sport And The Body A Philosophical Symposium Lea &Febiger Philadelphia 1974 (Repunled)
- 12. William Morgan And Klaus V Mefer (Editors) Philosophy Inquiry In Sport Human Kinetics Publishers Inc Champaign 1988
- 13. John D Massengale (Editor) 'Trends Towards The Future In Physical Education 'Human Kineties Publishers IncChampargnHiliois 1987
- Curry Timpothy J & Jioobu Robert M Sports A Social Perspective Pretice Hall Inc Englewood Chffs N.J. 1984
- Donald Chu Jeffrey O Segrave And Beverly J Becker (Editors) Sport And Higher Education Human Kinetics Publishers Inc Champaign 1985
- 16 Hemery David 'Sporting Excellence A Study Of Sports Highest Achievers Willow Books Collins 8 Gration Street London WI 1986
- 17. Bruca Davies And Geoffrey Thomas (Editors) Science And Sporting Performance Management Or Manipulation Clarendon Press Oxford 1982
- 18. Best David 'Expression In Movement & The Arts A Philosophical Enquiry Lepus Books 205 Gt Portland St. London W. 6LR 1974.

#### SYLLABUS PRESCRIBED FOR SEMESTER - II M. PHIL. + PH.D. (INTEGRATED) (PHYSICAL EDUCATION)

ECT -02 :Sports Medicine In force from June – 2013

#### [Internal = 30 marks]

[External = 70 Marks]

#### UNIT – I:

A brief, history of Sports Medicine – definition – meaning, preventive – curative and rehabilitation aspects – The participation, physical examination. Types of sports injuries – general principles of injury management – Management of soft-tissue injuries, bony injuries, nerve injuries.

#### UNIT - II:

Regional Athletic injuries and management – head injuries – shoulder injuries – arm and elbow joint injuries – wrist and hand injuries – thigh and knee injuries – lower leg, ankle and foot injuries. Evaluation and management of specific disorders – traumatic lesions of the spinal cord, after care of fracture – treatment of back disorders, and deformities – low back pain and scoliosis.

#### **UNIT - III:**

Applied sports medicine: Role of exercise in the prevention of various diseases: Cardio – vascular – disorders – Asthma – diabetes – obesity.

#### **UNIT - IV:**

Importance of sports nutrition. Exercise and food intake – before during and after activity – computerized meal and exercise plan – role of carbohydrate in prolonged and severe training. Diet prescription for football, basketball, volleyball and tennis players and athletes.

#### UNIT - V:

Therapeutic modalities and procedure - principles of therapeutic modalities and procedures - hydrotherapy - Diathermy -ultrasound- electrical muscle stimulation - transculanor electrical nerve stimulation (TENS) cry kinetic, cold compress and therapeutic exercises, cold spray - paraffin bath, ultraviolet- therapeutic exercises cold spray - massage. Meaning and definition of physical rehabilitation. Rehabilitation - goal of rehabilitation, rehabilitation programme - types of exercises - isometric - isotonic - isokinetic - manual resistance - proprioceptive neuromuscular facilitation programme for neck, shoulder, shoulder joint, arm and elbow joint - wrist and hand, lower- back, hip joint - thigh, knee, lower leg, ankle and foot.

#### **Reference Books:**

- 01. Edward L. For, Donald K. Mathews: The Physiological basis of Physical Education and Athletic, Baundura college Publishing
- 02. Anthony P. Millar, sports Injuries and their Management, Willaims&Witkins and Associates Pvt. Limited, Australia.
- 03. KrusenKottke, Ellwood, Physical Medicine and Rehabiliation, W.B. Saunders company, Philadelhia, London, Tornota.
- 04. James A could III Geroge I Davies, Orthopaedic and sports physical therapy, The C.V. Mosby company St. Locus ToronotoPrenetion.
- 05. Richards Schredier John C Kennnedy Marcus L Plant, Sports Injuries Mechanism, Prevention and Treatment, Williams & Wilkins, Baltiomore, London, Losangele: Sydney.
- 06. Rohert N. Swinger: Motor learning and human performance, the Macmillian Co., New York.
- 07. MiroslavVanke and Bryant'JCratty: Psychology and the Athlete, Macmillan Co., London.

#### SYLLABUS PRESCRIBED FOR SEMESTER - II

#### M. PHIL. + PH.D. (INTEGRATED) (PHYSICAL EDUCATION)

## ECT -02: TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION AND SPORTS SCIENCES

In force from June – 2013

#### [Internal = 30 marks]

#### [External = 70 Marks]

#### Unit-I

- 1) -Meaning of Measurement and Evaluation
  - -Inter relationship of Measurement and Evaluation
  - -Principles of Measurement and Evaluation
  - -Modern Trends in Measurement and Evaluation
- 2) -Need for Selecting Appropriate Measurement and Evaluation in Physical Education and Sports.
  - -Criteria for Selecting Evaluation and Measurement.
  - -Technical Standards: Objectivity, Reliability, Validity, Norms.
  - -Administrative Considerations: Equipment, Time, Money, Utility, Facility, Feasibility.

#### Unit-II

#### 1) Tests of Physical Performance.

Speed, Agility, Balance, Strength, Endurance, Flexibility, California Perceptual Motor abilities and Generality of components.

#### 2) Tests of Physical Fitness:

- -Basic Fitness Test, AAHPER Youth Fitness Test,
- -Physical Fitness Index,
- -Sergeant Test,
- -National Physical Efficiency Tests,
- -Indiana Motor Fitness Test,
- -Test for High School and Collegemen,
- -KrausWeber Tests.

#### **Unit-III**

#### 1) Motor Fitness Tests:

- -J.C.R. Test
- -Oregon Motor Fitness Test
- -California Motor Fitness Test

#### 2) Motor Ability Test:

- -Barrow Motor Ability Test
- -Carpender Motor Ability Test
- -Scott Motor Ability Test
- -Latchaw Motor Ability Test.

#### **Unit-IV**

#### 1) Motor Educability Test:

- -OPNA Brane Motor Educability Test
- -Johnson Metheny Motor Ability Test
- -Cardio-Vascular Test:
- -Callagher&Brouha Harvard Step Test for Secondary Boys.
- -Tuttle Pulse Ratio Test
- -Schneider Cardio-Vascular Test

#### 2) **Postural Test**

- -IOWA Posture Test
- -Woodruff Body Ligament Posture Test
- -Foot Print Angle Test

#### Unit-V

#### **Test of Specific Sports Skills:**

**Badminton** -Miller Wall Volley Test French Short Serve Test

Basketball -Knox Basketball Test Leilich Basketball Test

Hockey -Schmithals- French Test Field Hockey Test, Friedal Field Hockey Test

Soccer -Warner Test of Soccer Skills Test, AAHPER Football Skill Test

Tennis -Dyer Tennis Test, Broer-Miller Forehand, Backhand Drive Test

Volleyball -LIBA -STAUFF Test, Brady Volleyball Test.

#### **Reference Books**

- 1) Nilgoose, Erle: "EVALATION IN HEALTH EDUCATION AND PHYSICAL EDUCATION", New York, McGra-Eill Book Co., Inc.
- 2) Cureton, Thomas K. `PHYSICAL FITNESS APPRAISAL AND GUIDANCE" St.Louis, The Mosby Company, 1947.
- 3) Bovard John F., Frederich W., Hagman, Parclcia E., "TEST AND MEASUREMENT IN PHYSICAL EDUCATION", Philadelphia, W.B., Sounders Company, 1949.
- 4) Meyers, Cariton R. and Blesh, Erwin T. " MEASUREMENT IN PHYSICAL EDUCATION", New York, The Fonald Press Company, 1962.
- 5) Campbell, W.R. and Tauker, N.M. "AN INTRODUCTION TO TEST AND MEASUREMENT IN PHYSICAL EDUCATION", London, C.Bellk& Sons Ltd., 1967.
- 6) Hunsicker, Paul A., and Monteyer, Hendry J. "APPLIED TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION" New York, Prentice Hall,1953.

#### SYLLABUS RESCRIBED FOR SEMESTER - II M. PHIL. + PH.D. (INTEGRATED) (PHYSICAL EDUCATION)

#### ECT -02: Yoga and Physical Fitness In force from June – 2013

#### [Internal = 30 marks]

#### [External = 70 Marks]

#### UNIT - I

Meaning – need – importance of historical background of yoga, types of yoga. Bhakti yoga, karma yoga, Gnana yoga, Raja yoga.

#### UNIT - II

Effects of yoga on different systems of human body, impact of yoga on daily life. Scientific effects of yogasanas. Pranayama-Kriyas: Therapeutic uses of yoga. Yoga and dietary principles.

#### UNIT - III

Definition – meaning of physical fitness – its need and importance, meaning of wellness – differences between physical fitness and wellness – the relationship between fitness / wellness and health – components of physical fitness and their meanings and importance.

#### UNIT - IV

Assessment of physical fitness – Athletic related fitness and health related fitness. Problems associated with measurement of Physical Education, Strength and endurance, assessment and prescription . Problems associated with measurement of cardio-vascular endurance.

#### UNIT - V

Body composition – techniques for assessing body composition. Nutrition for weight control and wellness. -Effects of exercises on physical fitness – preventive and curative. Exercise for cardiovascular disease – chronic obstructive pulmonary diseases – diabetes -back pain

#### **Reference Books:**

- 01. Swami Digamberji. Yoga and Physical Education, Kavivalyadhama. Konavla, India.
- 02. Yogamimamsa, Quarterly Publication KaivalyadhamaLonavla, India.
- 03. Dr.M.L.Gharota, Science of Yoga, Kaivalayadhama, Lonavla, India.
- 04. Dr.Karambalkar, Therapeutic value of yoga, Kaivalyadhama, Lonavla, India.
- 05. Barry L.Johnson and Jack K Nelson, Practical Measurements for evaluation in Physical Education Burguss Publishing Company, University of Minnesota.
- 06. Werner.W.K.Hoeger and Sharon A Hdger, Fitnees and wellness, morton publishing company, Englewood.
- 07. Resthowel and A.K. Uppal, Foundations of Physical Education, Friends Publication, New Delhi.

Admission Process Fee: Rs. 500/-

### SWARNIM GUJARAT SPORTS UNIVERSITY

Application for Admission to the Degree of Master of Philosophy + Doctor of Philosophy (M.Phil. + Ph.D. Integrated)2015-16

(Please read instructions carefully before filling up the form)

Application Form No. \_

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10. Please indicate whether you have qualified in any of the following. If yes, attack								
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	Qualified in SET / NET							
	Have cleared any fellowship/scholarship/JRF/TRF examinations and are entitled to							
	receive fellowship from national bodies.							
• Being a teacher, having been granted leave and fellowship by a national body for								
	undertaking Quality Improvement Programme or under any other program.							
11.	Total experience: (1) teaching: years							
	(2) Professional: years							
	(Atta	ach evidence for th	ne above experience)					
12.	Current Occupation/Employment:							
	(Give Name and Address of the Employer)							
	(No objection certificate from present employer must be attached with the application form)							
13.	Faculty in which registration is sought:							
14.	Subject /discipline in which M.Phil. isproposed to be done:							
15.	Broad area of research:							
16.	Provisional eligibility: YES/NO If yes : No.:date							
17.	Details of the Admission Process Fees Paid:							
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	Name of the Bank:							
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Declaration								
All the particulars given above are true to the best of my knowledge. I state that, I have not								
been admitted as a student for this or any other degree programme of this or any other								
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#### How to apply, fill and submit the application form:

- 1. Write your name as it appears in your Metric/HSC/equivalent board exam mark-sheet.
- 8. Category

Tick Open do not belong to SC/ST/OBC

Tick SC if you belong to Scheduled Caste

Tick ST if you belong to Scheduled Tribe

Tick OBC if you belong to Other Backward Classes

Select appropriate category from others, if applicable.

#### Latest non-creamy layer certificate must be attached where applicable.

- 10.If you have qualified in any of the examination mentioned in the list, give documentary evidence for it. Write down in the box about the document that you have attached.
- 12. Give name and address (with PIN code) of your employer.

# (A no-objection certificate from your employer must be attached with the application form.)

- 13. The faculty is 'Physical Education & Sports Sciences'.
- 14. Write your subject/discipline in which M.Phil. is proposed to be done.
- 15. Write your broad area of research.
- 16. If you are required to provide provisional eligibility certificate, write down its number and date.
- 17. The Admission Process fee must be paid by a Demand Draft of any nationalized bank of Rs. 500/- drawn in favour of 'Swarnim Gujarat Sports University, Gandhinagar'. Write, amount Rs., Date, Draft No.,the Name of the Bank, Branch and Branch Code. All these details are mandatory.

# FORMS NOT DULY FILLED IN OR WITHOUT REQUIRED DOCUMENTS WILL NOT BE ACCEPTED.

The duly filled in form along with the required documents before **30**<sup>th</sup> **June 2013** shall be sent to:

The Registrar,
Swarnim Gujarat Sports University,
P.T.C. Campus, Nr. PunitvanCircle, Sector 19, Gandhinagar-382019.

For further inquiry contact: Ph.No.(079)23230091, Email: info.sgsu@gmail Website: www.sycd.gujarat.gov.in/swarnimgujaratsportsuniversity

# SWARNIM GUJARAT SPORTS UNIVERSITY DEPARTMENT OF PHYSICAL EDUCATION SYLLABUS FOR M.PHIL.+ PH.D.(INTEGRATED)

# ENTRANCE TEST 2015-16 Subject Contents

#### Unit-I

Introduction and definition, aims and objectives of physical education and other terms – health education and recreation.

Philosophies of education as applied to physical education – Idealism, Naturalism, Realism, Pragmatism, Existentialism, Humanism.

Biological factors of Physical activity – benefit of exercise, growth and exercise, exercise and well being, sex and age, characteristics of adolescent, body type.

Psychological basis of Physical education- Play and play theories, general principles of growth and development, Principles of Motor-Skill acquisitions, transfer of training and its effects.

Sociological basis of physical education – Socialization process, social nature of men and physical activity, sports as cultural heritage of mankind, custom traditions and sport, competition and cooperation.

Physical education in ancient Greece, Rome, contemporary Germany, Sweden, Denmark and Russia.

Olympic movement – Historical development of ancient and modern Olympic Games.

Physical education in India

#### **Unit-II**

Physiology of Muscular activity, Neurotransmission and Movement Mechanism.

Physiology of Respiration

Physiology of blood circulation

Factors influencing performance in sports

Bioenergetics and recovery process

Athletic injuries - their management and rehabilitation.

Therapeutic modalities

Acrogenic aids and doping

#### **Unit-III**

Joints and their movement – planes and axis

Kinetics, Kinematics linear and angular levers

Laws of motion, principles of equilibrium and force, spin and elasticity

Posture, postural deformation and their correction

Muscular analysis of Motor movement

Mechanical analysis of various sports activities

Mechanical analysis of fundamental movements – (running, jumping, throwing, pulling and pushing)

Massage manipulation and therapeutic exercises.

#### **Unit-IV**

Learning process – theories and laws of learning

Motivation, theories and dynamics of motivation in sports

Psychological factors affecting sports performance – viz. stress, anxiety, tension and aggression

Personality, its Dimensions, theories, personality and performance

Individual difference and their impact on skill, learning and performance

Group dynamics, team decision and leadership in sports

Socio-metric, economics and political issues in sports

Media and sports

#### **Unit-V**

Development of teacher education in physical education

Professional courses in Sports and Physical education in India

**Professional Ethics** 

Qualities and Qualification of Physical Education Personnel

**Principles of Curriculum Planning** 

Courses content for academic and professional courses

Age and characteristics of pupils and selection of activities

Major points for the preparation of time table for classes of physical education.

#### **Unit-VI**

Health-Guiding principles of health and health education

Nutrition and dietary manipulation

Health-related fitness, obesity and it's management

Environmental and occupational hazards and first aid

Communicable diseases -their preventive and therapeutic aspects

School healthprogramms and personnel hygiene

Theories and principles of recreation

Recreation programme for various categories of people

#### **Unit-VII**

Characteristics and principles of sport training

Training and periodization

Training method and specific training programme for development of various qualities

Technical and tactic preparation for sports

Short – term and long term training plans

Sports talent identification – process and procedure

Preparing for competition – (build up competition, main competition, competition frequency, psychological preparation)

Rules of Games and Sports and their interpretation

#### **Unit-VIII**

Nature, Scope and types of research

Formulation and selection of research problems

Sampling –Process and techniques

Methods of research

Data collection – tools and techniques

Statistical techniques of data analysis – measure of central tendency and variability, correlation, normal probability curve, t-test, f-test, chi square, z-test

Hypothesis formulation, types and testing

Writing research report

#### Unit-IX

Concept of test, measurement and evaluation

Principles of measurement and evaluation

Construction and classification of tests

Criteria of test evaluation

Concepts and assessment of physical fitness, motor fitness, motor ability and motor educability Skill test for Badminton, Basketball, Hockey, Lawn Tennis, Soccer, Volleyball

Testing psychological variables – Competitive anxiety, aggression, team cohesion, motivation, self concept

Anthropometric measurement and body composition

#### **Unit-X**

Concept and principles of management

Organization and functions of sports bodies

Intramurals and Extramural

Management and techniques of teaching

Principles of planning Physical Education lessons

Pupil-teacher interaction and relationship

Concept of Supervision

Note: - After passing in the theory examination all the rules mentioned in the Rules for Ph.D. programme of Swarnim Gujarat Sports University will be followed.