

CENTRAL UNIVERSITY OF TAMIL NADU

Post Graduate Diploma in Fitness Management

(w.e.f. 2023-24)



**Department of Physical Education and Sports
School of Education and Training
Central University of Tamil Nadu
Tiruvarur-610005**

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REGULATIONS FOR POST GRADUATE DIPLOMA IN FITNESS MANAGEMENT

Post Graduate Diploma in Fitness Management (PGDFM) is a one-year professional Degree program of two semesters with the objective to enhance competence among students from a holistic and interdisciplinary outlook. The course gives an understanding and exposure on fitness management, fitness training, facility and weight management, designing the fitness training programme for different categories, fundamentals of anatomy, physiology, kinesiology and nutrition and recovery. The course will also facilitate employment for them as Trainers/ Instructors/ Coaches in fitness centers, health clubs, sports clubs, sports academy and etc.

A. Vision:

To develop world class fitness trainers who can independently handle fitness programs with scientific background, instilling a range of exercise prescriptions matching individual differences and specific fitness needs.

B. Mission:

- M1:** To provide student centric environment learning through scientific and systematic mode of teaching.
- M2:** To create available facilities and state of the gymnasium and playfields
- M3:** To encourage theory and practical skills through teaching practice and internship.
- M4:** To promote varied development programmes for creation of platforms and knowledge enhancement in thrust area
- M5:** To enhance leadership qualities, ethical and moral values and innovate skills among the students by providing quality education in a competent manner.

C. Program Educational Objectives (PEOs):

- PEO1:** To enable students to design fitness programs for different categories.
- PEO2:** To educate students on planning and designing appropriate diet plans for meeting the nutritional requirements of various populations.
- PEO3:** To facilitate students, use the skills required for becoming an effective fitness trainer.
- PEO4:** To provide knowledge about functions of body the effect of different intensities of load on the body.
- PEO5:** To educate students on indications and contraindications while training the clients with individual differences and special needs.

D. Post- Graduate Attributes for Fitness Management

1. **Knowledge:** Students will be able to independently work as fitness professionals with the knowledge gained through this program.
2. **Problem analysis:** They will be able to identify, analyze and rectify the health and fitness problems among the fitness training seekers of the society.
3. **Design & development of solutions:** To integrate the study of childhood, social context of physical fitness & design specific programs.
4. **Conduct investigations of complex problems:** The programme comprises of theory as well as practical courses and teaching practice so as to enable students to investigate complex problems.
5. **Modern tool usage:** Students will stay updated on the subject knowledge, pedagogical knowledge on tools and techniques used for testing components and fitness training.
6. **The Fitness trainer and society:** The Learners in the chosen sub-fields of Fitness would exhibit characters of Seasoned-Spirited citizens respecting the Community wellbeing.
7. **Environment and sustainability:** They will understand the impact of fitness as a regular practice in societal and environmental contexts,

and demonstrate the knowledge and need for sustainable development.

8. **Ethics:** Students will display ethical values as they directly handle human training with societal responsibility on the norms of fitness training and practice.
9. **Individual and team work:** They will be capable of Functioning effectively as a personal trainer and also as a professional
10. **Communication:** Student would display social skills of higher order for effective communication with clients.
11. **Project management and finance:** Students will gain Capability of getting employment as fitness trainers, instructors/coaches in Private institutions and organisation along with independent financial management skills.
12. **Life-long learning:** The Learners thoughtfully trained in their choice sub-fields of health and Fitness/Physical Education possess /practice/propagate relevant Work/Job/Career Competences.

E. PEO to Mission Statement Mapping

	PEO1	PEO2	PEO3	PEO4	PEO5
M1	3	3	3	3	3
M2	3	3	2	3	3
M3	3	3	3	3	3
M4	3	3	3	3	3
M5	2	3	3	3	3

F. Program Outcomes (POs)

- PEO1:** Students will be able to design fitness programs for different categories.
- PEO2:** Students will be able to design appropriate diet plans for meeting the nutritional requirements of various categories of people.
- PEO3:** Students will display array of skills as an effective fitness trainer.
- PEO4:** They will have a clear understanding about functions of body and the effect of different intensities of load on the body.
- PEO5:** Students will be aware of and follow the guidelines related to indications and contraindications while training the clients with individual differences and special needs.

G. PO to PEO Mapping

	PEO1	PEO2	PEO3	PEO4	PEO5
PE1	3	3	3	3	3
PE2	3	2	3	2	3
PE3	3	3	3	3	3
PE4	3	3	3	3	3
PE5	3	3	3	3	3

H. Program Structure

No	Course Code	Course Content	Course Type	Credits	Hours / Week	Marks	
						Internal	External
SEMESTER I							
1	PES4011	Fitness and Wellness	Theory & Practical	4	4	40	60
2	PES4012	Sports training	Theory & Practical	4	4	40	60
3	PES4013	Fundamentals of Anatomy and Physiology & Kinesiology	Theory	4	4	40	60
4	PES4014	Facility and Weight Management	Theory	4	4	40	60
5	PES4015	Calisthenics & Weight training	Practical	6	12	100	
	Total	5 courses		22	28	500	
SEMESTER II							
6	PES4021	Fundamentals of Nutritional application in health and fitness	Theory	4	4	40	60
7	PES4022	Fundamentals of exercise testing and Prescription	Theory & Practical	4	4	40	60

8	PES4023	Designing fitness training program	Theory & Practica 1	4	4	40	60
9	PES4EC02 1	Injuries and Therapeutic Modalities	Theory & Practica 1	3	3	40	60
10	PES4EC02 2	Yoga & Meditation	Theory & Practica 1				
11	PES4EC02 3	Fitness Training for Youth, Women and Older Adults	Theory & Practica 1				
12	PES4024	Practicum II	CCP	6	12	100	
13	PEOE01	OPT from another department	OE	3	3	100	
		Library	-	0	2	-	
	Total	5 courses		24	32	600	

**Internal Assessment, Pattern of question papers, Minimum Passing standard and Grading / Grade Points/ CGPA/ SGPA/ Conversion of Marks into Grades as per CUTN Norms.*

Program Credit Scheme:

Semester	Core Courses			Elective Course			Total Credits
	No. of papers	Credits (L+T/P)	Total Credits	No. of papers	Credits (L+T/P)	Total Credits	
I	5 (16L+12P)	16L+12P	22	-	4L+2P	-	22
II	6 (18L+12P)	18L+12P	24	1	4L+2P	6	24
Total Credits for the Program	7	(28L + 16P)	46	1	4L+2P	6	46

- ❖ For each Core and Elective Course, there will be 4 lecture hours of teaching per week.
- ❖ Electives to the maximum total of 6 credits.
- ❖ Duration of examination of each paper shall be 3 hours.
- ❖ Each paper will be 100 marks. Out of which, 60 marks shall be allocated for semester examination and 40 marks for internal assessment and Theory and practical papers shall be 50 marks for semester examination, 25 marks for Internal Assessment and 25 marks for practical respectively.
- ❖ L= Lecture, T- Theory; P = Practical

Distribution of Percentage of Components in the Course:

S.No	Course Components	Credits	Percentage
1	Core Course	28	70%
2	Core Course Practical	12	10%
3	Discipline Specific Elective (DSE)	3	10%
4	Open Elective (OE)	3	10%
5	Soft-Skill (SS)	-	-
6	Internship / Field Visit / Training – Department Specific	-	-
7	Project / Dissertation	-	-
Total		46	100%

I. Common Evaluation Scheme for all the courses**Theory course**

	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	Total
Internal	8	8	8	8	8	40
External	12	12	12	12	12	60
Total	20	20	20	20	20	100

Practical course

	Unit-I	Unit-II	Unit-III	Unit-IV	Unit-V	Total
Continuous Assessment	20	20	20	20	20	100
Total	20	20	20	20	20	100

J. Internal Assessment**Theory course**

	Marks
Assignment / Seminar / Attendance / Test	20
Test	20
Total	40

Practical course (Continuous Assessment)

	Marks
Laboratory Report / Assignments	75
Viva / Test	20
Attendance and Class Interaction	5
Total	100

K. External Assessment

Category	Marks
Part- A (Objective - $10 \times 1 = 10$ marks)	10
Part- B (Shorts Answer - $5 \times 3 = 15$ marks)	15
Part- C (Long Answer - $5 \times 7 = 35$ marks)	35
Total	60

L. Common Rubric for Assignments

Sl. no	Criteria	100%	75%	50%	25%	0%	Relation to COs
1	Content 50%	Ideas are detailed, well developed, supported with evidence & facts and examples	Ideas are detailed, Developed and supported with evidence and facts mostly specific.	Ideas are presented but not particularly developed or supported.	Content is not sound		CO1, CO2, CO3, CO4
2	Organization 50%	Includes title, introduction, statement of the main idea with illustration and conclusion.	Includes title, introduction, statement of the main idea.	Organizational tools are weak or missing	No Organization		CO1, CO2, CO3, CO4

M. Common Rubric for Seminar

Sl. no	Criteria	100%	75%	50%	25%	0%	Relation to COs
1	Knowledge and Understanding 50%	Exceptional knowledge of facts, terms and concepts	Detailed knowledge of facts, terms and concepts	Considerable knowledge of facts, terms and concepts	Minimal Knowledge of facts, terms and concepts	Not Attended	CO1, CO2, CO3, CO4
2	Organization 50%	Well communicated with logical sequences, examples and references	Communicated with sequences	Just Communicated	No coherent communication	Not Attended	CO1, CO2, CO3, CO4

N. Program Specific Guidelines

Duration of the Program:

The duration of the course is one academic year with two semesters. A candidate must complete the course of study for the Post Graduate Diploma in Fitness Management (PGDFM) and pass all papers in Semester I and II within a total period of two years commencing from the date of admission to the PGDFM program.

Eligibility for Admission:

For admission to the PGDFM program the candidate shall fulfill the following conditions;

- Bachelor's degree in any discipline.
- Candidate should have secured a minimum of 55% of marks or 6.0 CGPA (On a 10-point scale) in the qualifying degree examination.
- For General category, 50% of marks or 5.5 CGPA (On a 10-point scale). For EWS/OBC (Non creamy layer) and 45 % of aggregate marks or 5.0 CGPA

(On a 10 Point scale) for SC/ST/PWD/widows/destitute women candidates.

Age Criteria:

- The candidate should be below the age of 28 years as on 1st July of the year of admission.
- Age relaxation will be given as per university rules to eligible categories.
- He/she should possess a high level of physical fitness to undertake daily heavy load of Physical exercises and should not have any Physical deformity or mental disability which prevents him/her from actively taking part in physical activities.
- If a student admitted to PGDFM program is found medically unsuitable at any stage of the program, have to discontinue the program.

Admission Procedure:

- All eligible candidates desirous of seeking admission to PG Diploma Course in Fitness Management should apply online before the prescribed last date.
- The admissions will be based on Written test conducted at the university premises, on the basis of the documents submitted by the candidates
- Candidates have to report to the examination venue on the prescribed date and time given in the CUTN website/call letter.
- *The candidates who qualify the written test will only be called for certificate verification and have to undergo a physical fitness test as mentioned below.
- Filling up of seats are based on GOI reservation norms.

****Candidates must possess all Originals/Credentials/Fitness Certificate (by a registered medical practitioner) and other documents for verification when they report for physical fitness test.***

Selection Criteria The candidate shall be selected to the Post Graduate Diploma in Fitness Management (PGDFM) program as per merit from the rank list which will be prepared based on the following.

- (i) **Written Test (100 Marks):** consist of 100 objective questions with one mark each to assess General knowledge, Current affairs on sports and Aptitude for the program.
- (ii) **Physical Fitness Test (50 Marks):** AAHPERD Youth Fitness Test comprising the following items to assess physical fitness.
1. Pull-ups (Boys)/Flexed- arm Hang (Girls)
 2. Flexed- leg Sit-ups for one minute
 3. Shuttle Run (30ft X 4)
 4. 50-Yard Dash
 5. 600- yard Run
 6. Standing Broad Jump

Course Modules:

Course module comprises theory and practical courses. In theory courses, there are mandatory core-courses and optional elective-course. In practical course, students have to demonstrate the practical skills and they will have to undergo teaching practice and internship.

i. Core Course

Core course means a subject that is compulsory as specified for all students undergoing the PGDFM program.

ii. Elective Course

Elective course means a subject which would enrich the PGDFM program where the students are allowed to choose from a category of subjects.

iii. Practical Course

Practical Course means a module of category of fitness which is compulsory for practice and demonstration as specified for all students undergoing the PGDFM program.

Choice Based Credit System (CBCS) and Grading

CBCS is an instructional package developed to suit the needs of students, to keep pace with the developments in higher education and the quality assurance expected of it in the light of liberalization and globalization in higher education. Post Graduate Diploma degree to be classified based on CGPA obtained into various classes as notified in the Examination policy as per the CUTN regulations.

Conduct and Discipline*

- ❖ If any incident of ragging comes to the notice of the authority, action will be taken as per the law prohibiting, and directions of the supreme court of India and the central/state government as well as the UGC regulations on curbing the menace of ragging in educational institutions, 2009.
- ❖ On admission the candidate and his/her parent/guardian have to give an undertaking to the office that their ward will not indulge in ragging and if found guilty of ragging then they will be punished by the institution as per UGC regulations.
- ❖ As per the order of the Supreme Court of India, in case an applicant for admission is found to have indulged in ragging in the past, admission may be refused and, if it is noticed later that he/she has indulged in ragging, he/she shall be expelled from the institution.
- ❖ Students are required to maintain excellent conduct both inside and outside the university campus and hostels. The department reserves the right to take disciplinary action including expulsion or rustication from university at any time during the course of study if a student violates college rules or acts in a manner which is detrimental to the college discipline.
- ❖ There are separate rules regarding discipline in the university, on and off the playfields, in the hostels, at assemblies, in the library, etc.

****University reserves the right to make change(s) in these rules at any time, which will be notified to the students for compliance.***

University Fee

Examination fee will be collected from the students as prescribed by the Central University of Tamil Nādu (CUTN) fees structure.

O. Common Model Question Paper

Part -A Objective type

10X1=10

1. Dimension of Health is classified in to
a) 3 b) 5 c) 7 d) 6
2. Types of physical fitness
a) 1 b) 2 c) 3 d) 4
3. It is a health-related physical fitness
a) Speed b) Agility c) Flexibility d) Balance
4. It is a Capacity to achieve the optimal quality of life.
a) Exercise b) fitness c) wellness d) health
5. Methods of flexibility
a) 2 b) 3 c)3 d) 5
6. It is a wok performed in a given time
a) Intensity b) work c) Volume d) Density
7. A body tend to be thin and tall
a) Endo b) Meso c) Ecto d) All
8. The excess body weight when compared with standard scale
a) Body b) over weight c) under weight d) obese
9. Cardiac means
a) Muscles b) heart c) Blood d) kidney
10. Stress can be minimized by
a) Meditation b) Music c)Yoga d) Exercise

PART- B SHORT ANSWER

THE ANSWER SHOULD NOT EXCEED 200 WORDS 5X3=15

11. What is physical fitness and its types? or Define Muscular Strength
12. What do you mean by physical activity? or Explain Body types
13. What are the principles of overload? Or how do you control body weight?
14. How do you relate fitness and the client capability? Or
Explain the principles of overweight management?
- 15.. Explain the need and demand of fitness in a society? Or justify the role of fitness trainer in community fitness?

PART-C ESSAY ANSWER

The answer should not exceed 400 words 5x7=35

16. Justify the importance of fitness or Explain the principles of training?
17. Elaborate the resistance training modalities? Or Narrate the essentiality of Nutrition for fitness enthusiasts?
18. Prepare a training program for 30 years of healthy individual? or
Draw a fitness and diet chart for the obese women?
19. What is plyometrics and explain its types with an example? Or
How do you prepare a fitness training program for adults men?
20. justify the differentiation of fitness exercises for cardiac patients and disabled? Or
Narrate the principles of resistance training programme?

Semester I
P.G. Diploma in Fitness Management
(PES4011)

FITNESS AND WELLNESS

Course Objective

To study the fundamental concepts of wellness, health and fitness, & its types and to provide basic knowledge on principles of sports training and to educate on exercise and well-being.

a. Course Outcome

Sno:	Outcome	Level
CO1:	The students will be able to understand the concept of Fitness, General & Specific fitness – Need & importance of Physical fitness.	Understand
CO2:	The students will be able to get the knowledge about health problems and health education and promotions.	Apply
CO3:	The students will be able to get the knowledge about the components of health and performance related physical fitness	Apply
CO4:	To assess the BMI, Obesity and get knowledge about weight management.	Apply
CO5:	To guide the proper nutrition for weight management, child health and sports.	Skill

b. Syllabus

Unit-I: Physical Fitness and Wellness

Meaning & Definition: Fitness, General& Specific fitness – Need & importance of Physical fitness. Meaning and definition of Wellness and Health. Dimensions of fitness (physical and mental). Wellness, Importance of wellness, Relationship between fitness, wellness and health. WHO definition of health. Dimension of health.

Unit-II: Health Education and its Impacts

Health problems, Health Education, its need and importance, Maintenance of health, role of science in public health. Occupational health, safety and Health policies National and international and instructions for health promotions.

Unit-III: Components Physical Fitness

Performance related Physical fitness Components (Speed, Strength, Endurance, Agility, Power and Flexibility) - Health related Physical fitness Components (Cardio-respiratory Endurance, Muscular Strength, Muscular Endurance, Flexibility and Body Composition).

Unit-IV: Healthy living

Factors influencing health, Occupational health, Importance of fitness, Health hazard, conditioning- Meaning: Training load – Adaptation – Recovery– Warm-up – Cool down - Repetition – Set – Bout –Volume – Intensity – Density. Principles of Sports training (overload, specificity, reversibility).

Unit-V: Fitness assessment: Measurement and Evaluation of physical fitness

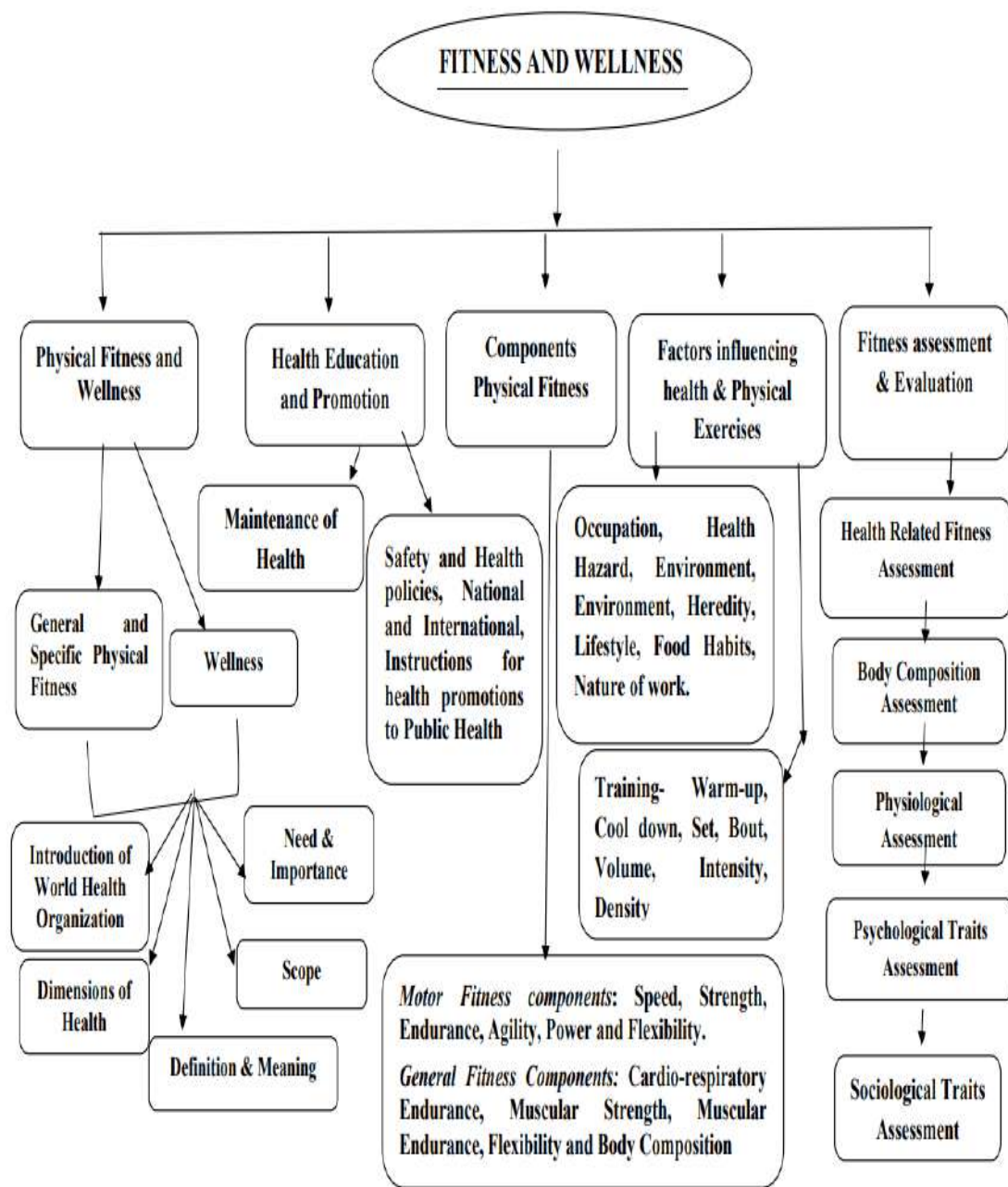
Health related, Occupational related, Body composition, Assessment of Physiological traits, Assessment of psychological traits and Assessment of sociological traits.

References:

- Anderson, Bob Pearl, Bill., and Burke, Edmund R.(2001). Getting in Shape Workout Programs for Men & Women. Mumbai: Jaico Publishing House
- Baechle, Thomas. R, & Earle, Roger.(2000). W., Essentials of Strength Training and Conditioning. Champaign: Human Kinetics,.
- Brooks,Douglas. S.(2004). The Complete Book of Personal Training. Champaign: Human Kinetics.
- Fahey, Thomas. D.(2005).Weight Training Basics. New York: McGraw-Hill.
- Newton, Harvey.(2010).Explosive lifting for Sports. Champaign: Human Kinetics.
- Nutbeam, D. (2019). Health education and health promotion revisited. Health Education Journal, 78(6), 705-709.
- Raczynski, J. M., & DiClemente, R. J. (Eds.). (2013). Handbook of health promotion and disease prevention. Springer Science & Business Media.
- Sandler, David.(2010). Fundamental Weight Training. Champaign: Human Kinetics.

c. Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	3	2	3
CO3	3	2	3	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3



Semester I
P.G. Diploma in Fitness Management
(PES4012)
SPORTS TRAINING

Course Objective:

To facilitate study and understand the various principles and methods of sports training and to provide the basic knowledge about periodization and strength development.

a. Course Outcome

Sno:	Course Outcomes	level
CO1:	Students will be able to understand the concept of training and its objectives, principles of over load.	Understand
CO2:	Students will be able to get the knowledge about weight training, circuit training, general training, specific training etc.	Apply
CO3:	Student will gain knowledge about general and specific fitness.	Apply
CO4:	The students will gain knowledge of Flexibility and balance and its types and benefits and they will gain the concept of strength development.	Apply
CO5:	The student will able to understand the process of strength development.	Skill

b. Syllabus

Unit-I: Training

Training: Meaning& objectives of training – The FITT Principles (Frequency, Intensity, Time, Type). The five ‘R’s. Principles (Range of motion, Resistance, Repetitions, Rest, and Recovery. Basic principles of training (Specificity, Overload, Reversibility). Points on Fitness and Training: Medical check-up, selection of equipment. Breathing regulation, selection of exercises – over training.

Unit-II: Means and Methods of Training

Introduction to various means to develop strength parameters, Type of Training Methods: General training – specific training, Weight training – Circuit training –interval training – Anaerobic training- Volume- intensity – Frequency – Density. Repetition training, Fartlek training – plyometric

training – Cross training, Aerobic training – Intensity - Duration – Frequency, type of exercises.

Unit-III: Periodization

Components of General Fitness and Specific fitness – Warming up – cool down -conditioning exercise- Health habits – Rest - Recreational Needs – Periodization in training – Single Periodization – Double periodization and multiple Periodization. Preparatory, competition and transition -Factors Determining periods-preparation of training schedules: Long Term plan-Short term plan –Micro Cycle, Meso-Cycle and Macro Cycle - recovery- adaptation.

Unit-IV: Flexibility and Balance

Flexibility – types of flexibility – benefits of flexibility, Means and methods to develop flexibility, flexibility exercises for fitness personals. Define balance and its purpose in performance enhancement and injury prevention, guidelines for balance training and balance exercises

Unit-V: Strength Development

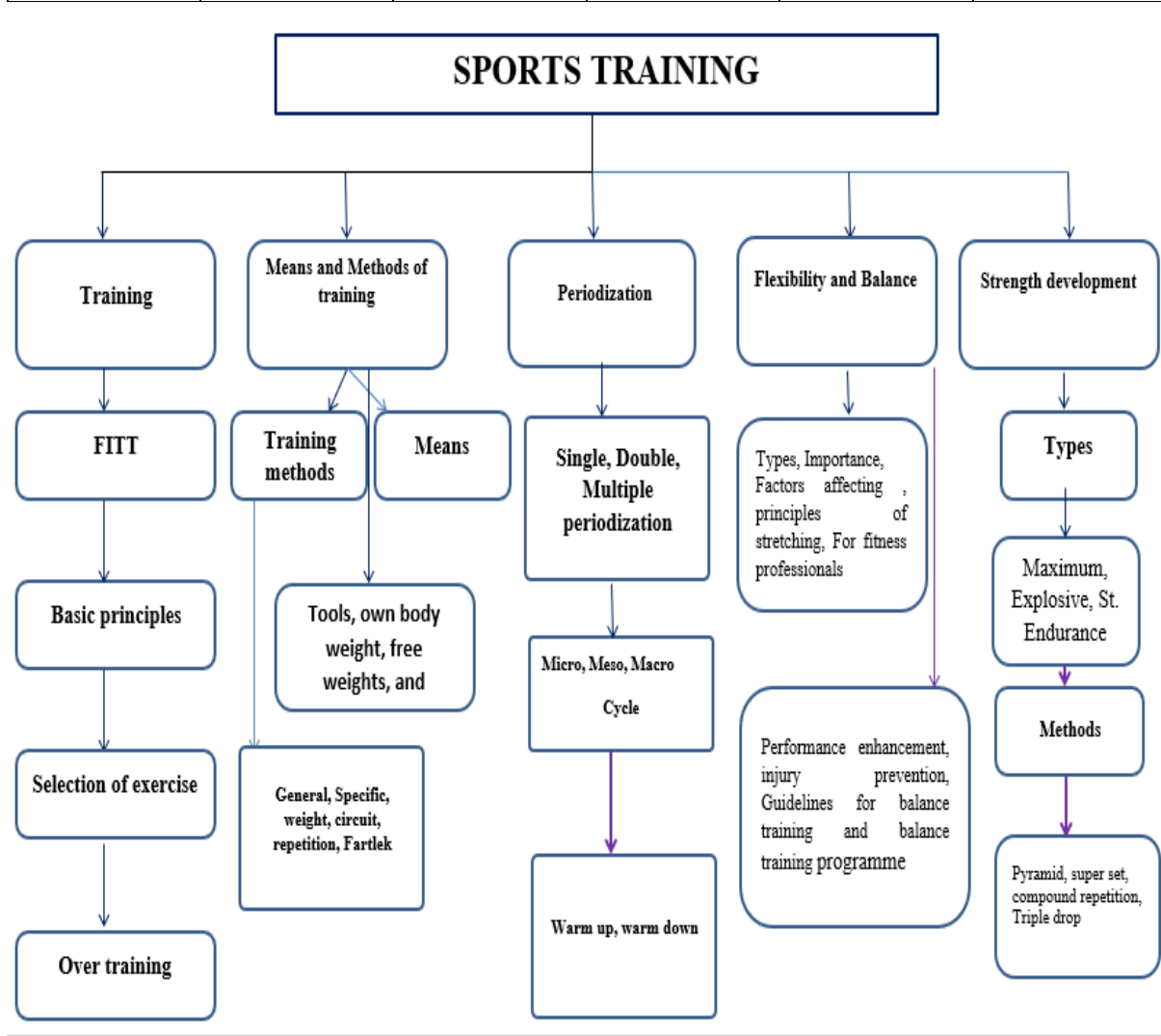
Theory and practice of strength development: - Structure – Maximum strength – Explosive strength – Strength endurance – Absolute strength – relative strength –Designing Weight training Program- Development of strength for static and Dynamic muscle activity– Development of strength by eccentric activity – Development of strength by Ballistic activities – Development of maximum strength – Development of Elastic strength – Development of strength endurance. Pyramid training - Super set.

References:

- Bompa, Tudor, and Carlo Buzzichelli. *Periodization of strength training for sports*. Human Kinetics Publishers, 2021.
- Thomas, Gavin. "Periodization: Theory and Methodology of Training (Book Review)." *The Sport and Exercise Scientist* 65 (2020): 10.
- Dick, Frank W. *Sports training principles*. Bloomsbury, 2014.
- Prentice, William E., and Daniel Arnheim. *Principles of athletic training: A competency-based approach*. New York, NY, USA.: McGraw-Hill, 2011.
- Fleck, Steven J., and William Kraemer. *Designing resistance training programs*, 4E. Human Kinetics, 2014.
- Chaitow, Leon. *Maintaining body balance, flexibility and stability*. Churchill Livingstone, 2004.
- Lloyd, Rhodri S., and Jon L. Oliver, eds. *Strength and conditioning for young athletes: science and application*. Routledge, 2019.
- Zatsiorsky, Vladimir M., William J. Kraemer, and Andrew C. Fry. *Science and practice of strength training*. Human Kinetics, 2020.

c. Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	2	3	3	3
CO3	3	3	3	3	3
CO4	3	2	3	3	3
CO5	3	3	3	3	3



Semester I
P.G. Diploma in Fitness Management
(PES4013)

FUNDAMENTALS OF ANATOMY, PHYSIOLOGY AND KINESIOLOGY

Course Objective:

To provide an understanding about the fundamental concepts of anatomy, physiology and kinesiology and to educate the importance of understanding parts of body, its functions and effect of exercise with movement science

a. Course Outcome

SNo:	Course Outcomes	Level
CO1:	Students will have a clear understanding of the basics of anatomy, physiology and kinesiology.	Understand
CO2:	They will have deeper knowledge on structure of various systems of the body.	Apply
CO3:	They will have deeper knowledge on functions of various systems of the body.	Apply
CO4:	To impart knowledge for enabling students to develop an idea regarding physiological basis of exercise.	Analyze
CO5:	To understand the anatomy and apply it in kinesiology	Skill

b. Syllabus

Unit-I: Introduction to Anatomy and Physiology

Meaning and definition of Anatomy and Physiology; Need and importance of the knowledge of anatomy and physiology in the field of fitness training, Organization of cell, tissue, organs and systems in the human body. Structure and function of eukaryotic cell.

Unit-I: Systems of the body – Part- I

Muscular System- Structure and functions of muscles (organization of connective tissue, contractile proteins), Types of muscle fibers and muscle contraction, Basics of Energy system (ATP, Aerobic and Anaerobic System).

Unit-II: Systems of the body -PART -II

Skeletal System- Types of bones (long bone, short bone, irregular bone, flat bone),Types of joints (hinge joint, pivot, ball and socket, gliding joint, saddle

joint) ;Respiratory system; circulatory system; Nervous system; excretory system; Endocrine and exocrine glands and their functions.

Unit-IV: Cardio respiratory Physiology

Structure and functioning of cardiovascular system, meaning of stroke volume, heart rate, cardiac output, blood pressure, Effect of exercise and training on cardiovascular system, Structure and functioning of respiratory system, Meaning of vital capacity, gas exchange, VO₂Max., Effect of exercise and training on respiratory system.

Unit-V: Kinesiology

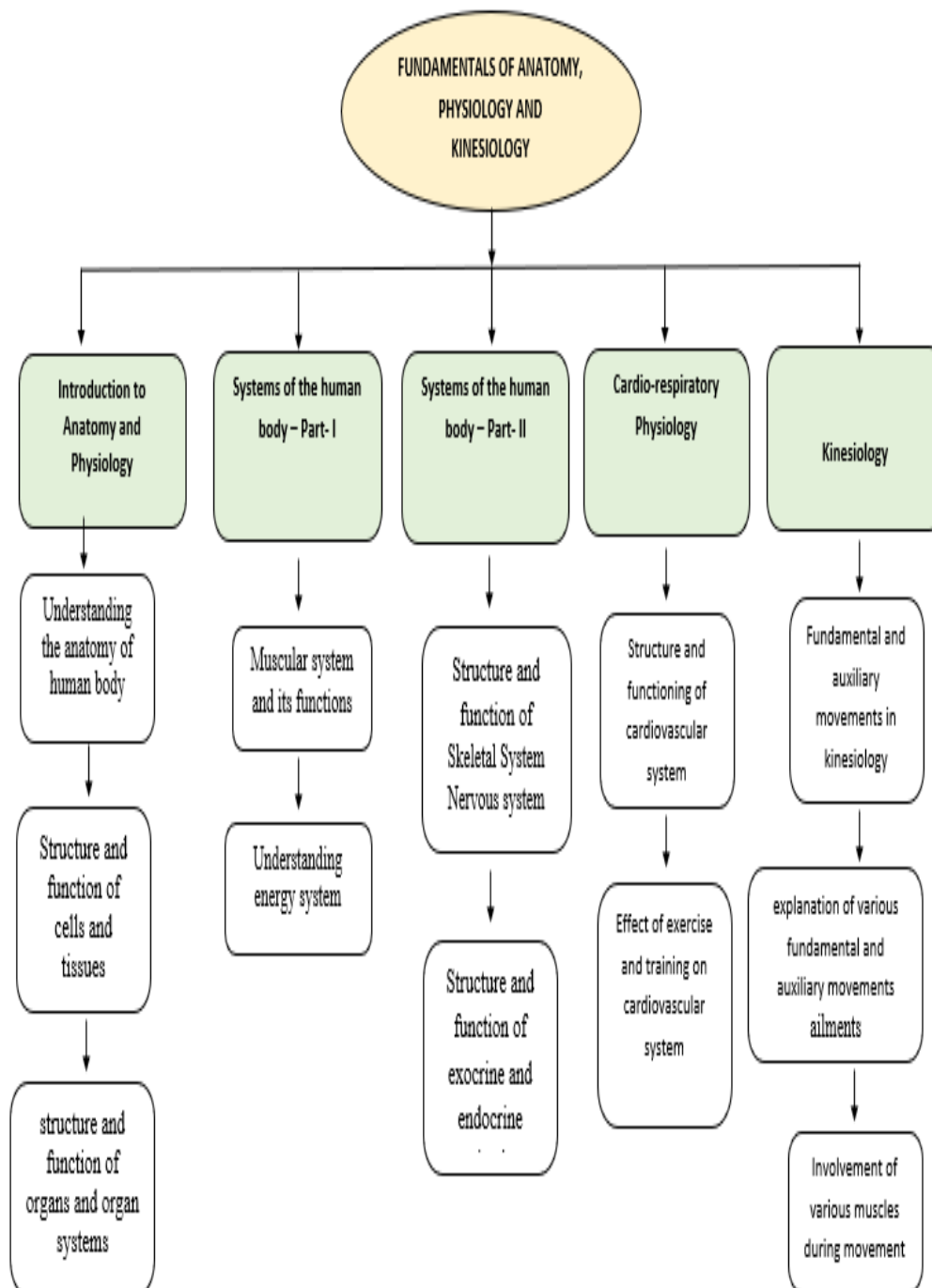
Introduction- Definition and importance of kinesiology Fundamental and auxiliary movements in kinesiology- Importance of description of movements, Definition of explanation of various fundamental and auxiliary movements, Involvement of various muscles during different fundamental and auxiliary movements of hip, knee, shoulder, elbow joint, shoulder girdle and trunk region.

References:

- Porcari, J., Bryant, C., & Comana, F. (2015). Exercise physiology. USA: F A Davis
- Willmore, J. H., Costill, David L., & Kenny, W. (2008). Physiology of sport and Exercise (4thed). USA, Human Kinetics.
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- Gardediner. F. P (2011) Advanced neuromuscular exercise physiology. USA: Human Kinetics.
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- Ferber, R., & Macdonald, S. L. (2014). Running mechanics and gait analysis. Human Kinetics.
- Floyd, R. T., & Thompson, C. W. (2006). *Manual of Structural Kinesiology*. McGraw-Hill.

c. Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	2	3	3	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3



Semester I
P.G. Diploma in Fitness Management
(PES4014)

FACILITY AND WEIGHT MANAGEMENT

Course Objectives:

To acquire knowledge infrastructure facilities and maintenance of facilities and to provide the basic knowledge about weight management

a. Course Outcomes:

SNo:	Course Outcomes	Level
CO1:	Students will be able to understand the facility management and its planning for fitness.	Understand
CO2:	Students will be able to get the knowledge about Maintenance of facilities & Human Resource management	Understand
CO3:	Students will get knowledge about Facility Construction for fitness	Understand
CO4:	Students will gain knowledge related to body compositions and process of weight management.	Apply
CO5:	They will be able to prepare a planning for weight management	Skill

b. Syllabus

Unit-I: Facility management

Definition and importance of facility management, facility manager, and managerial functions, management theory, Developing Infrastructure facilities – fundamentals of planning, planning for existing facilities , planning for future facilities, fitness center: Construction of fitness center size – measurements – facilities of floor exercise – aerobics – swimming pools – indoor and outdoor facilities – facilities for fitness evaluation and medical aid – Audiovisual facilities – Reception room – facilities showers and toilet.

Unit-II: Maintenance of facilities & Human Resource management

Multi gym - weight training equipment- operation, maintenance and repair- weight plates – Dumbbells – Barbells –Indoor – Outdoor – Swimming pools – Electrical machines – Exercise bikes – Treadmill – Hydraulic machines – Criteria to be followed in the selection of equipment – Body wraps – Elastic straps – Vibrating machines, meaning, definition and functions of human resource management, human resource audit and formation management model (Administrative and scientific model)

Unit-III: Facility Construction

Construction planning, advantages and disadvantages of various construction options, preconstruction phase, documentation, construction elements, interior components, exterior components, flooring, Roofing, seating, restoration and renovation, project costs, cost variables, construction and other costs, Site location, sit cost, site selection and facility design.

Unit-IV: Body Composition and Weight management

Definition and importance of body composition, estimated percent body fat, Skin fold thickness – Body mass index – Waist to Hip ratio – Hydrostatic weighing- Girth measurement technique, Causes of obesity: Genetics, over eating, physical inactivity, Over weight: Fat cell development, fat cell metabolism, body fat and its distribution, health risk associated with body weight and body fat, set point theory, Methods of determining over weight, Electrical Impedance method.

Unit-V: Steps of planning of Weight Management

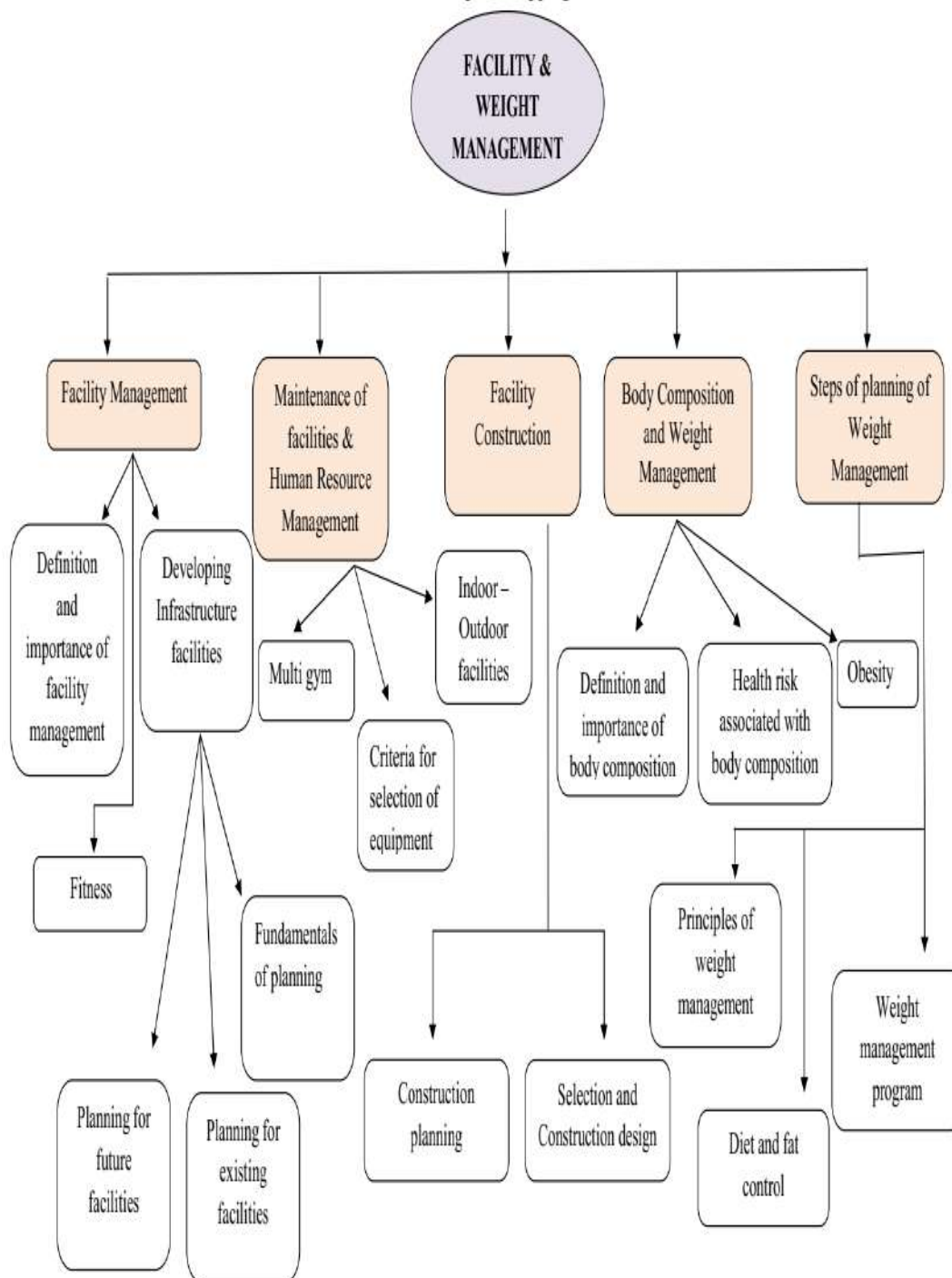
Exercise and weight loss, Principles of weight management and fat control: Diet and fat control - physical activities – Combination of physical activity and diet control – Estimating diet daily caloric requirement; Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss.

References:

- Edward T. Howley B. Dov Franks.(1986) Health Fitness instructor's Handbook second edition.
- Gil Fried. (2015) Managing sports facilities, Third Edition, Human Kinetics, University Of New Haven.
- Howley. E.T and Franks B.D.(1997).Health Fitness Instructor's handbook. Third Edition. Champaign Illinois: Human kinetics.
- Lindle J. (1997) .Aquatic Fitness Professional Manual. Florida: Aquatic Exercise Association.
- Pyke F.S.(1991). Better Coaching – Advanced Coach's Manual, Australian Coaching Council.

c. Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	2	3	3
CO3	3	3	3	3	3
CO4	3	3	2	3	3
CO5	3	3	3	3	3



Semester I
P.G. Diploma in Fitness Management
(PES4015)

Practicum – I - CALISTHENICS AND WEIGHT TRAINING

Course Objectives:

To acquire basic knowledge about nomenclature and procedure of calisthenic exercises and to provide practical exposure and knowledge about use of various machineries and implement and their use and maintenance.

a. Course Outcomes:

	Course Outcomes	Level
CO1:	Students will be able to demonstrate all the free hand exercises.	Skill
CO2:	The students will gain knowledge on importance and procedure of performing stretching exercise	Understand
CO3:	Students will be well versed in safe and effective handling of barbells, Dumbbells, Kettlebells, Mudhgar, vobble board and swiss ball	Apply
CO4:	Students will gain expertise in use of, maintenance and method to handle hydraulic machines as well as other trending methods including Indian traditional strength training forms	Apply
CO5:	They will also develop exposure to various methods of training for developing aerobic fitness	Analyze

b. Syllabus:

Unit-I: Calisthenics Exercise

Arm Swinging – Forward – downward – Side wards and circling backward – Trunk bending forward & backward – Leg-(Hands on hips) Hopping with leg swinging sideways – Arm circles with hops — Jumping jack – Prone alternating arm and leg raises – Prone alternating arm raises – Pelvic raises – Squat thrusts – Running in place –Knee push – ups Dips from bench –Sit – ups – Leg rises – Trunk curl – ups –Trunk twister – Trunk side bends – Trunk raises – Half squats – Squat jumps – Inner thigh lift – Knee hug.

Unit-II: Stretching Exercises

Heel cord stretch – Adductor stretch – Hamstring stretch – Quadriceps stretch – Pectorals stretch –lower back stretch – Upper back stretch – Triceps stretch – Deltoid stretch – Internal rotation stretch (Shoulder) – External rotation stretch (shoulder) – Piriform stretch – Iliacsoas stretch – Upper calf stretch – Lower calf stretch –Forearm and wrist stretch –Bicep stretch , - gluteus stretch – abdomen stretch – oblique stretch.

Unit-III: Barbell Exercises and Dumbbell Exercises

A) Barbell Exercises

Shoulder press – Bench press – Arm curl – Back curl – Wrist curl – Wrist roll – Upright rowing – Bent over rowing – Bent arm pullover – Triceps extension – Good morning – Trunk twist – Half squat – Heel raise – Dead lift – Hack squat – Bench press – shoulder press, clean, jerk, snatch.

B) Dumbbell Exercises

Shoulder press – One arm row – Dumbbell fly – Lunges with dumbbells – Squats – Dumbbell curl – Triceps extension – Standing calf raise with dumbbell – Dumbbell laterals – Wrist curl – Supination – Pronation – Inward rotation of the shoulder (rotator cuff) – Outward rotation of the shoulder – Shoulder shrug – front raise – lateral raise.

Unit-IV: Weight Machines

I) Hydraulic equipment: Lat pull down – Low pulley – Peck deck – Lateral raise – Bench press – Shoulder press – Leg curl – Leg press – Abdominal crunch – Hyper extension – Hip adductor – Hip abductor – Half squat – Roman Bench – Abdominal conditioner – Dipping – Chinning – Leg raise, Butter fly.

II) Core exercises – Floor exercises, Swiss Ball, Wobble Board; Indian Traditional Strength Training Methods – Indian Push-Ups, Baithaks & Mudhgar; Medicine ball exercises and Swimming,

Unit-V: Aerobic Training Equipment

A) Aerobic Exercises:

Treadmill (Motorized) – Stationary Bicycle –Mountaineer – Rowing machine – Exercise cycle – Double burner – Manual treadmill. Walking – Jogging – Running – Swimming-Skipping- Stepping on the bench - Spot running – Side stepping.

References:

Newton, Harvey. Explosive lifting for sports. Human Kinetics, 2010.
Sandler, David. Fundamental weight training. Human Kinetics, 2010.

c.Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	3	3	2
CO3	3	3	2	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3

Semester II

P.G. Diploma in Fitness Management
PES4021

FUNDAMENTALS OF NUTRITION APPLICATION IN HEALTH AND FITNESS

Course Objectives:

To familiarize students with basic aspects of Nutrition and Weight Management and to provide insight on nutrients and its quantitative requirement for fitness maintenance.

a. Course Outcomes:

	Course Outcomes	Level
CO1:	Students will be able to understand the concept of sports nutrition, basic nutrition guidelines and role of nutrition in enhancing health and fitness.	Understand
CO2:	Students will be able to get the knowledge about impact and intricacies of Nutrition and Hydration before, during and after workout.	Understand
CO3:	Students will be able to understand the concept of Body composition, BMI, Obesity and acquaint with the weight management methods and nutrition guidelines for weight management.	Understand
CO4:	They will be able to chalk out the nutritional requirements for fitness training	Skill
CO5:	Students will learn the value of hydration	Apply

b. Syllabus

Unit-I: Introduction of Nutrition to fitness

Meaning, definition and importance of Nutrition, concepts of nutrition- Nutrition for tissue maintenance, Nutrition and Growth, Nutrition and Immune function, Nutrients, classes of Nutrients, food pyramid, Functions of food,- Fast food – Vegetarian Diet – Balance diet , Dietary allowance and daily values, Basic Food pyramid, food hygiene, food consumption.

Unit-II: Macro Nutrients and Micro Nutrients

Carbohydrates: Meaning, nature, source, classification & functions of carbohydrate, Protein & Fats. Vitamins: Need and importance of vitamins, classification of vitamins: Fat soluble and water-soluble vitamins, Minerals: Importance of Minerals, sodium, chloride, potassium, calcium, phosphorus,

Magnesium and sulfur, recommendations of minerals and its sources, deficiencies, Water and body fluids: water balance and recommended intakes, fluid and electrolyte balance, acid base balance.

Unit-III: Life cycle Nutrition

Nutrition during Infancy: Energy and Nutrient needs, breast milk, infant formula, mealtimes with infants. Nutrition during Childhood: Energy and Nutrient needs, Hunger and malnutrition in children. Nutrition during Adolescence: Growth and development, energy and nutrient needs, food choices and health habits, Nutrition and Longevity, Ageing process, energy and nutrient needs of older adults, Nutritional guidelines for Fitness group, Diet programming for fitness, recommended values pre, during and post fitness training.

Unit-IV: Nutritional requirements in fitness training

Eating for exercise, computing daily calorie requirements, estimating calorie requirements using RMR, using BMI, Identifying correct food portion size, food labels, calculation of nutritional value, Nutrition and Hydration (before, during and after workout).

UNIT V Nutrition and Hydration values for different categories

Meal planning, Growth and development during different stages of lifecycle, Nutrition for adults, older adults and old populations, Nutrition and Hydration guidelines for fitness personals and weight class sports, Strategies to promote healthy weight loss in athletes, Use of nutritional supplements in strength/power sports- use, effects, efficacy and safety.

References:

Dan Benardot (2012). Advanced sports Nutrition, Second Edition, Human Kinetics.

Ira Wolinsky (1998). Nutrition in Exercise and Sports, Third Edition, CRC Press, New York.

James L. Groff and Sareen S. Gropper (2000). Advanced Nutrition and Human Metabolism, Third Edition, Wardsworth Thomson learning.

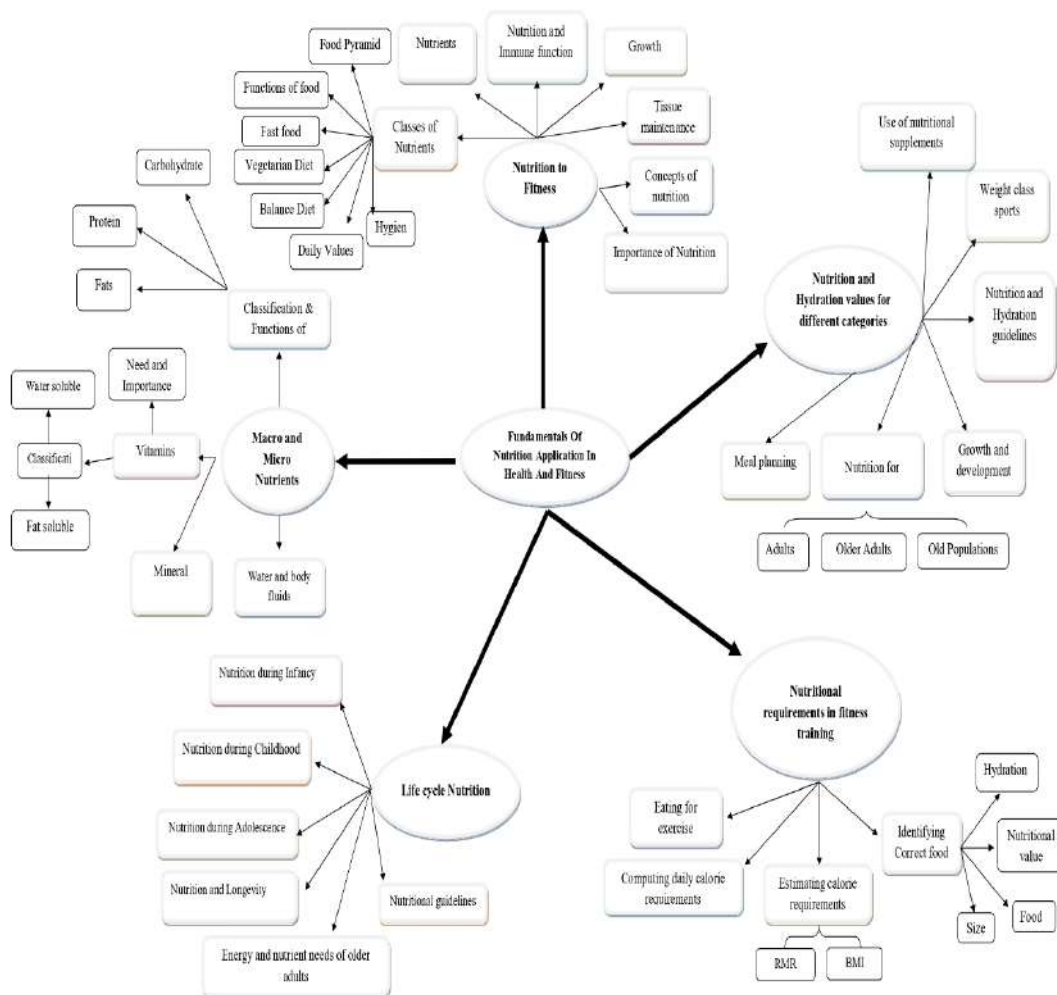
Williams.(1992) Basic Nutrition and Diet therapy, Ninth Edition, Mosby year book.

Eleanor N.Whitney(1999) Understanding Nutrition, Wards worth publishing company, USA.

Dan Benardot (2012). Advanced sports Nutrition, Second Edition, human kinetics.

c.Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	2	3	3	3
CO3	3	3	3	3	2
CO4	3	3	3	3	3
CO5	3	3	3	3	3



Semester II

P.G. Diploma in Fitness Management

PES4022

FUNDAMENTALS OF EXERCISE TESTING AND PRESCRIPTION

Course Objectives:

To study the fundamental concepts exercise testing & prescription and to provide basic knowledge on principles of exercise testing & prescription.

a. Course Outcomes:

	Outcomes	Level
CO1:	The students will be able to understand the concept of exercise testing & prescription.	Understand
CO2:	The students know about the health-related physical fitness assessment.	Understand
CO3:	The students know about the functional physical fitness assessment.	Apply
CO4:	To students will be able to understand the physiological impacts and its assessment.	Understand
CO5:	The students will be able to know the exercise prescription and its implementation.	Apply

b. Syllabus

Unit-I: Preparation of Exercise Testing

Health screening before beginning an exercise program, pre-exercise evaluation prior to beginning an exercise program, Importance of pre-exercise testing, past medical history, physical examination of heart rate, blood pressure, Laboratory tests, risk classification, client preparation, calibration of testing equipment.

Unit-II: Health Related Physical Fitness Assessments

Reasons for the assessment of health related fitness, basic principles and guidelines surrounding health related fitness testing, test environment, test order, measurement of resting heart rate, blood pressure and body composition, cardio respiratory fitness contra-indications of exercise testing, maximal exercise testing.

Unit-III: Muscular Fitness and Functional Assessment

Importance of muscular fitness assessment,, techniques and limitations, testing safety reliability of assessment, body statue and testing, flexibility assessment, factors influencing reliability and validity, sit and reach evaluation, occupational assessment, clinical assessment, traditional exercise testing, simulated work testing and early rehabilitation.

Unit-IV: Exercise Testing Procedure

Monitoring and termination, post exercise, safety, interpretative strategy, Exercise test scores, exercise testing procedures for healthy populations (Cardio respiratory, Musculo skeletal, Group exercise programming), exercise testing procedures for clinical populations.

UNIT V Exercise prescription for healthy populations

Cardio respiratory exercise prescription, Musculoskeletal exercise prescription, Adaptations to cardio respiratory exercise training, Group exercise programming, exercise prescription in special populations, women, pregnancy, children and other adults.

References:

- Lippincott Williams & Wilkins.(2014). ACSM'S manual for Guidelines for Exercise testig and prescription, Seventh Edition, Human Kinetics.
- Tudor O.Bompa,(2017) Periodization: Theory and methodology of training, Sixth Edition, Human kinetics.
- Tudor O.Bompa.(2015). Periodization training for sports, Third Edition, Human Kinetics.
- Jay R. Hoffman.(2012). NSCA'S Guide to Program Design, Human Kinetics.
- Michael Kellmann.(2002). Enhancing recovery, Preventing under performance in athletes, Human kinetics.

c. Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	3	2	3
CO3	3	3	3	3	3
CO4	3	2	3	3	3
CO5	3	3	3	3	3



Semester II
P.G. Diploma in Fitness Management
PES4023

DESIGNING FITNESS TRAINING PROGRAM

Course Objective:

To provide the knowledge and understanding of designing fitness training program and to inculcate the guidelines on designing a training program in line with individual needs

a. Course Outcomes:

	Course Outcomes	Level
CO1:	students will be able to know the basic principles of resistance training.	Understand
CO2:	students will be equipped with the knowledge of program designing for cardio-respiratory conditioning	Understand
CO3:	students will be equipped with the knowledge of resistance training programming.	Apply
CO4:	students will be equipped with the knowledge of flexibility training effective program design.	Understand
CO5:	students will get to know more about the designing the fitness program.	Skill

b. Syllabus

Unit-I: Principles and periodization

Basic principles of resistance training and exercise prescription: basic definition voluntary maximal muscular actions, training intensity and volume, periodization progressive overload, rest periods, muscle action specificity, muscle -group specificity, energy- source specificity and safety aspects.

Unit-II: Designing Fitness Program

Designing Program for Cardio respiratory conditioning: training aerobically, cardio respiratory fitness, smart progression, interval training, benefits of interval training, guidelines for performing intervals, top aerobic exercises, cardio respiratory conditioning and recovery indicators and recovery measures.

Unit-III: Process of strength training program

Designing training programming a balanced approach: meaning and importance of resistance training, choice and order of exercise, program design and recovery indicators and recovery measures.

Unit-IV: Stretching and its developmental process

Designing Program for flexibility: Physiological and Biomechanical Basics, Types and relative risks of stretching, Best method for flexibility, PNF Stretching, Active- isolated flexibility, How to develop flexibility.

Unit-V: Guidelines for training program

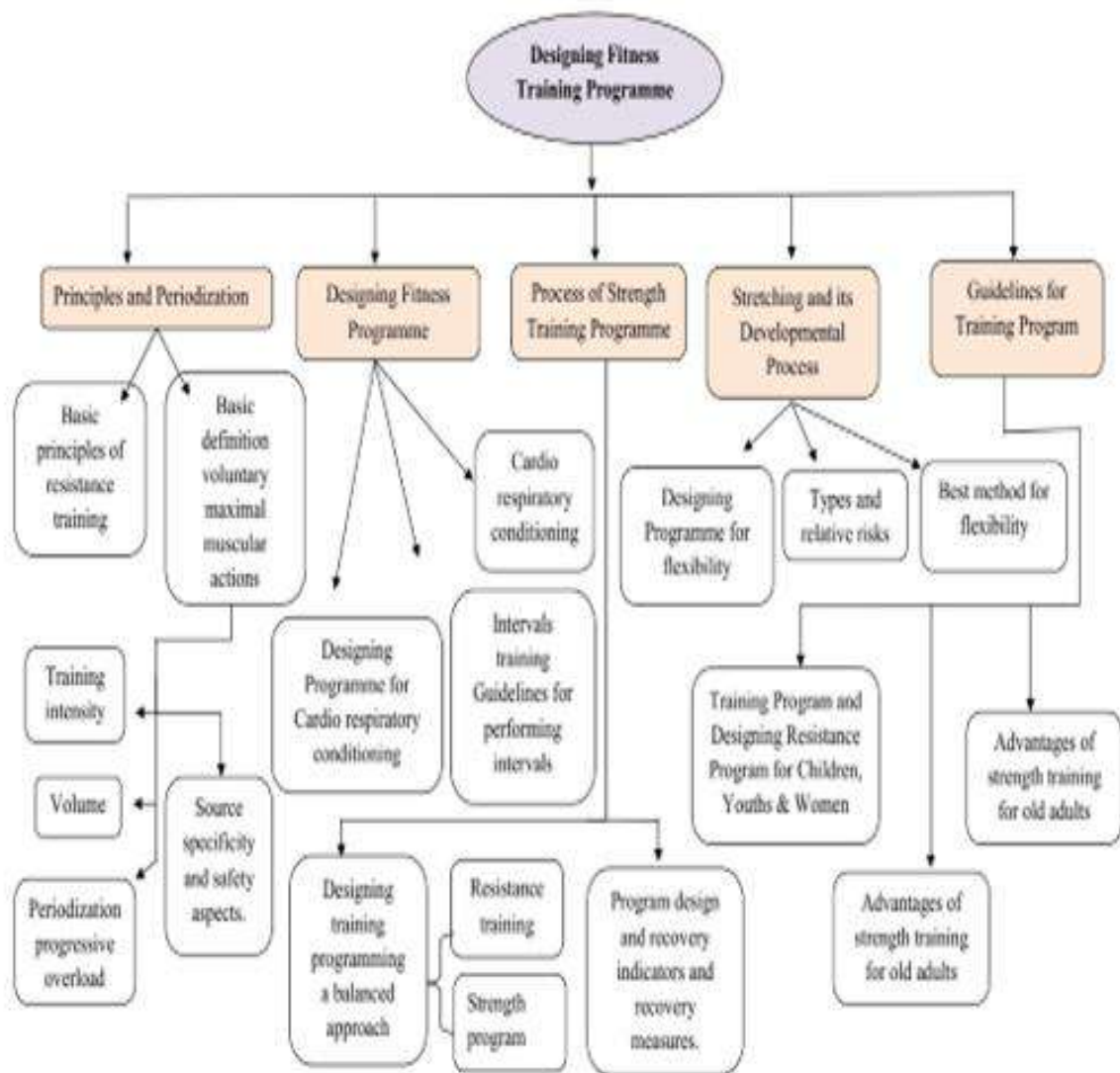
Guidelines for Children Resistance Training Program and Designing Resistance Program for Youths, Designing resistance program for women, Exercise during pregnancy, pre and post Natal exercises. Importance of conditioning for cardiac patients and selection of exercises for youth, women, old adults and cardiac patients.

References:

- Byrne C., and Eston R. (2002). Maximal-intensity isometric and dynamic exercise performance after eccentric muscle actions. *J. Sports Sci.* 20(12).
- Fleck kraemer, (2004). *Human kinetics Designing Resistance training programs.*
- Douglas S Brooks,(2004).*The complete Book of personal Training.*
- Wolters Kluwer, Lippincott Williams and Wilkins *ACSM Resource Manual for Guidelines for Exercise Testing and Prescription.*
- Lewis-McCormick, Irene. *A Woman's Guide to Muscle and Strength.* Human Kinetics, 2012.
- Kraemer, William J., and Steven J. Fleck. *Strength training for young athletes.* Human Kinetics, 2005.
- Faigenbaum, Avery D., and Wayne L. Westcott. "Strength & power for young athletes." (No Title) (2000).
- Graves, James E., and Barry A. Franklin. *Resistance training for health and rehabilitation.* Human Kinetics, 2001.
- Lockette, Kevin F., and Ann M. Keyes. "Conditioning with physical disabilities." (No Title) (1994).
- Lloyd, Rhodri S., and Jon L. Oliver, eds. *Strength and conditioning for young athletes: science and application.* Routledge, 2019.
- Zatsiorsky, Vladimir M., William J. Kraemer, and Andrew C. Fry. *Science and practice of strength training.* Human Kinetics, 2020.

c.Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	2	3	3
CO3	2	3	3	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3



Semester II
P.G. Diploma in Fitness Management
PES4EC021
INJURIES AND THERAPEUTIC MODALITIES

Course Objectives

To provide basic knowledge about Athletic Injuries and to understand the various therapeutic exercises for various injuries.

a. Course Outcomes

SNo:	Outcomes	Level
CO1:	Students will be able to understand the concept of injuries and prevention of injuries.	Understand
CO2:	Students will be able to get the knowledge about posture its effects and cause.	Apply
CO3:	Students will gain knowledge about Common injuries of upper limb with reference to pre-cautionary measure and remedial exercises and CPR.	Understand
CO4:	Students will able to know the therapeutic modalities and it's implementations.	Skill
CO5:	Students will gain knowledge of relaxation tools and it's technique.	Skill

b. Syllabus

Unit-I: Athletic Injuries

Basic concept of injuries, Athletic training, Assessment, Rehabilitation, prevention of injuries, management and treatment of injuries, education and counseling, sign and symptoms, Mechanism, treatment, common sports injuries, acute injuries, chronic injuries, tips for preventing injury.

Unit-II: Posture

Introduction to posture, causes and effects of posture, postural defects, correction of common postural defects through exercise, introduction to common soft tissue injuries sustained in sports and their common first aid management.

Unit-III: Injuries and it's Preventions

Common injuries of upper limb with reference to pre-cautionary measure and remedial exercises, Common injuries of lower limb with reference to pre-cautionary measure and remedial exercises, introduction to Osteoarthritis with reference to pre-cautionary measure and remedial exercises, Introduction to CPR (Cardio Pulmonary Resuscitation)

Unit-IV: Therapeutic Modalities

Therapeutic Modalities: Meaning and Concept, Therapeutic Effects, Uses, and Contraindications of the Following Therapeutic Modalities: Transcutaneous Nerve Stimulation (TNS), Laser therapy, Shortwave diathermy & Ultrasound and its contraindications.

Unit-V: Relaxation Tools and Rehabilitation

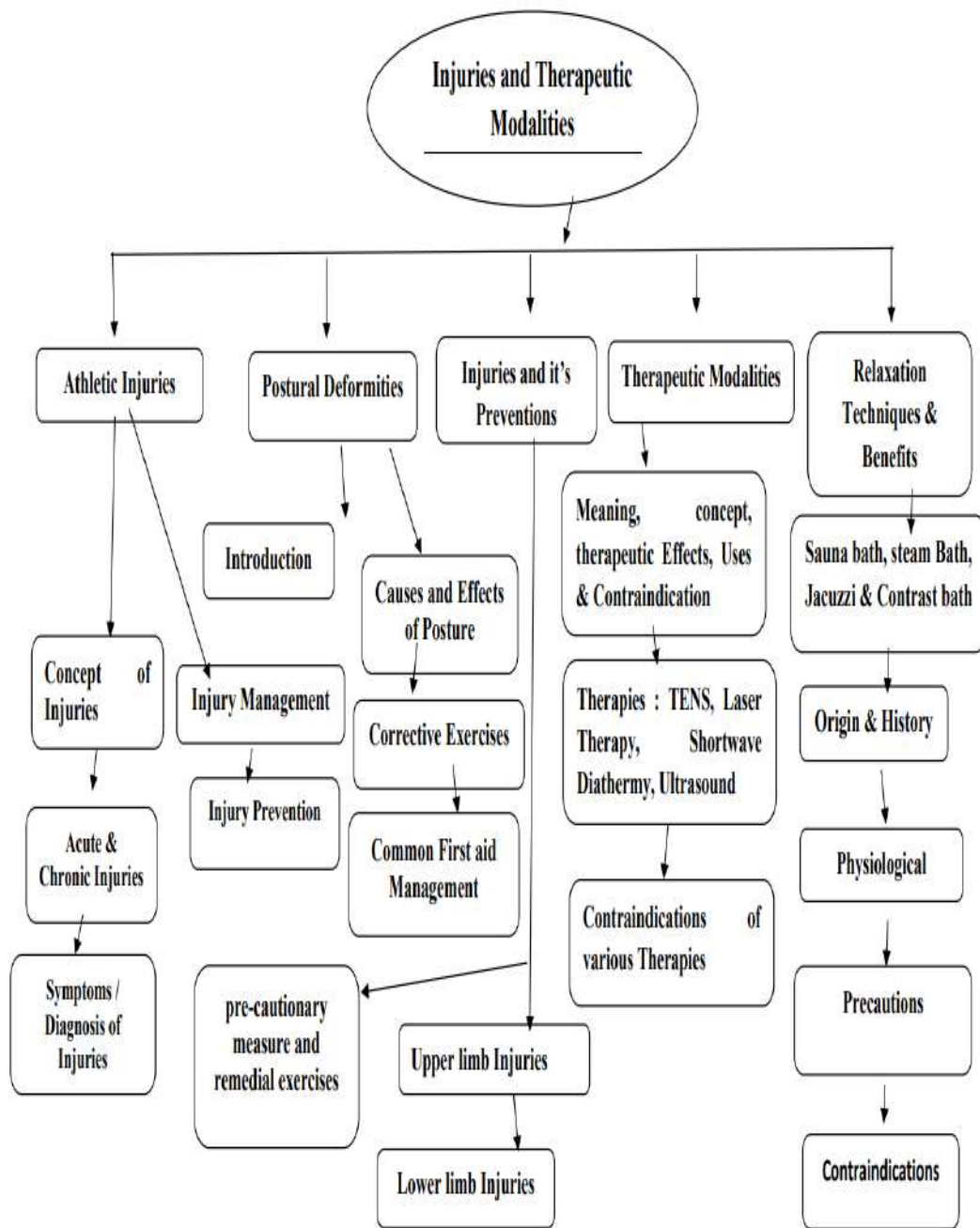
Concepts and importance of relaxation technique, Types of relaxation, Sauna Bath: origin and history of sauna bath, types of sauna bath, therapeutic benefits of sauna bath, precaution and contra indication, steam Bath: therapeutic benefits of steam bath, precaution and contra indication. Jacuzzi: types of Jacuzzi, effects of Jacuzzi, Contrast bath: Physiological effects of contrast bath, pre-caution of contrast bath.

References:

- Edward J. Shahady & Micheal J. Petrizzi. (2008). Sports Medicine for coaches and trainers, second edition, Friends publication, India.
- Reddy R.V.S. (2009). Sports injuries, sports publication, India.
- Peggy A. Houglum. (2010). Therapeutic exercise for Musculoskeletal injuries, Third Edition, Human kinetics, USA.
- David C. Reid. (1992). Sport injury Assessment and Rehabilitation, Churchill Livingstone.
- Larry J. Durstine and Geoffrey E. Moore. (2003). ACSM'S Exercise management for persons with chronic diseases and disabilities, second edition, Human Kinetics.
- Peter M. Tiddius. (2008). Skeletal muscle damage and Repair, Human kinetics.
- McCrorry, P. (2006). Clinical guide to sports injuries.
- Comfort, P., & Abrahamson, E. (Eds.). (2010). Sports rehabilitation and injury prevention (pp. 223-463). UK: Wiley-Blackwell.
- Kanosue, K., Ogawa, T., Fukano, M., & Fukubayashi, T. (Eds.). (2015). Sports injuries and prevention (No. 12148). Tokyo: Springer Japan.

c. Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	2	3	3	3
CO3	3	3	3	3	3
CO4	3	3	2	3	3
CO5	3	3	3	3	3



Semester II
P.G. Diploma in Fitness Management
PES4EC022
YOGA AND MEDITATION

Course Objectives

To provide basic knowledge about yoga and meditation and to understand the various modalities of yoga and meditation

a. Course Outcomes

	Course Outcomes	Level
CO1:	Students will be able to understand the concept of yoga and philosophy.	Understand
CO2:	Students will be able to get the knowledge about principles and limbs of yoga.	Understand
CO3:	Student will get knowledge about asanas, kriyas, pranayama and it's types.	Skill
CO4:	Students will gain knowledge about bandhas, mudras and meditation techniques.	Skill
CO5:	Students will get the knowledge about yoga and it's impact on health through research.	Analyze

b. Syllabus

Unit-I: Introduction to Yoga

Origin of Yoga & its brief development, Meaning of Yoga & definition, Need and importance of yoga in fitness, types of Yoga, Yoga Philosophy and Misconceptions about yoga and their solutions.

Unit- II: Principles of Yoga

Principles of Yoga, pranayama, kriya practice, Essentials of yoga practices – Prayer, Yogic Diet, Ideal place, discipline, dress, bathing, time and sequence for yogic practices, Asthanga Yoga (eight limbs of yoga).

Unit-III: Principles of Asanas

Principles of Asanas, Meaning of Asana, Classification of Asanas and its types, Meaning of Pranayama, Classification and types, Meaning of Shat Kriya its types and principles, Meaning of Kundalini and different types of chakras.

Unit- IV:Kriyas, Bandhas, Mudras and Meditation

Need and importance of meditation, types of meditation, effects of meditation, Introduction of Kriya, Bandha and Mudra, Importance of Kriya and its scientific approach, Importance of Bandhas and its scientific approach, Importance of Mudras and its scientific approach.

Unit –V Yoga Education

Basic, applied and action research in Yoga. Difference between yogic practices and physical exercises. Yoga education centers in India and abroad. Competitions in Yoga.

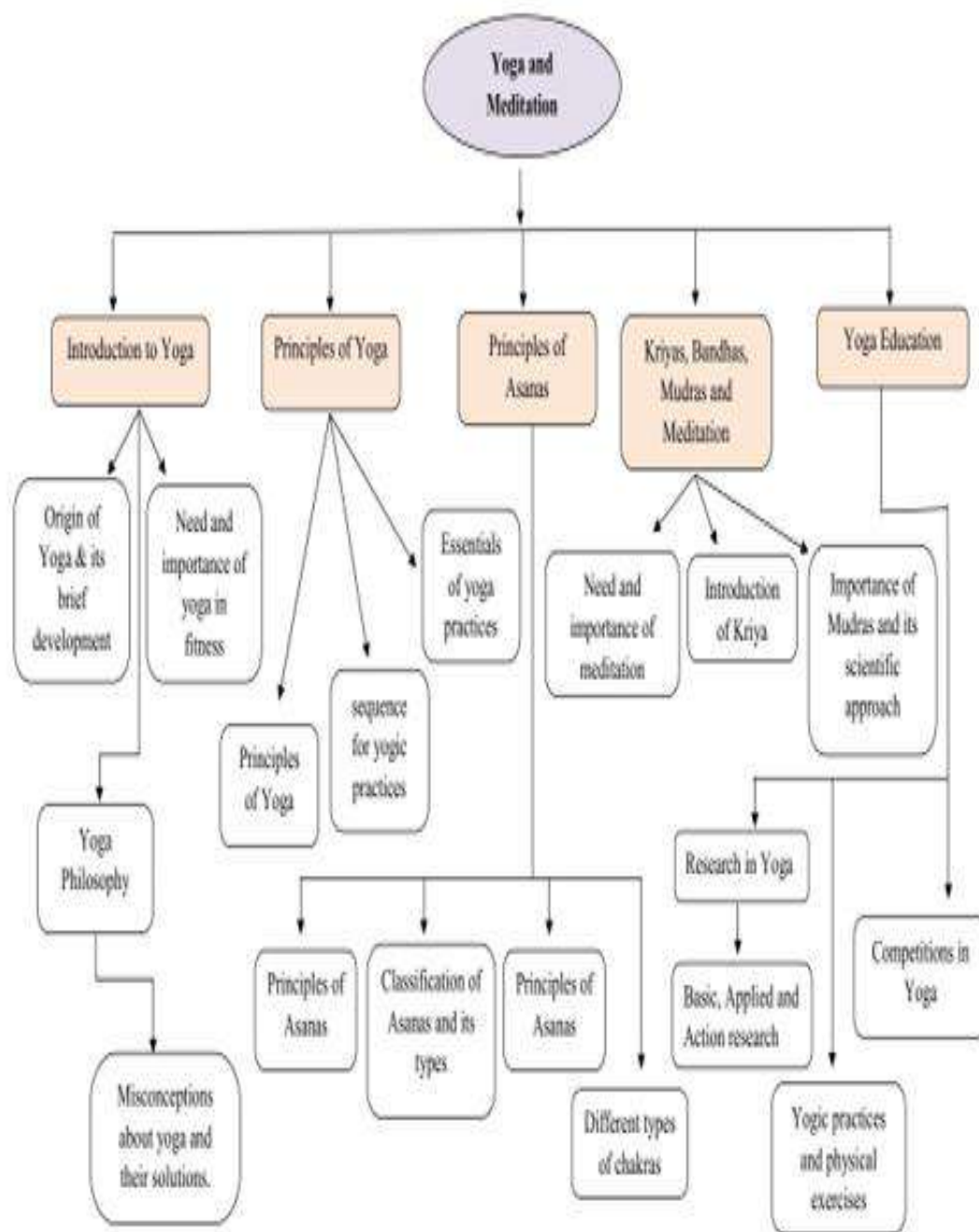
Practical: Yoga, Asana, Suryanamaskar, Pranayama & Meditation

References

- Ajay Swami.(1976). Psychotherapy of East and West: A Unifying paradigm, Honesdale, Pennsylvania: Himalyan International Institute of Yoga Science and Philosophy, USA.
- Gharote, M.L.(1982) Guidelines for Yogic Practices, Medha Publication, Lonavala.
- Joshi, K.S.(1985).Yoga in Daily Life, Orient Paper Back, New Delhi.
- Joshi K.S.(1990). Yogic Pranayama, Orient Paperback, New Delhi.
- Mahesh Yogi.(1963).Transcental Meditation, New American Library, New York.
- Rama Swami ,Ballantine,R& Ajay Swami.(1976). Yoga and Psychotherapy, Honesdale, Pennsylvania: Himalyan International Institute of Yoga Science and Philosophy, USA.
- Swami Satyananda.(1989). Asana, Pranayama, Mudra, Bandha , Bihar School of Yoga, Munger.

c.Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	2	3	3	3
CO3	3	3	3	3	3
CO4	3	3	2	3	2
CO5	3	3	3	3	3



Part – II
Semester II
P.G. Diploma in Fitness Management
PES4EC023

FITNESS TRAINING FOR YOUTH, WOMEN AND OLDER ADULTS

Course Objectives

To provide basic knowledge about designing fitness program for youth, women and older adults.

a. Course Outcomes

	Course Outcomes	Level
CO1:	students will be able to understand the concept Strength Training, Guidelines for Children Resistance Training Program, Age Group Strength Programs.	Understand
CO2:	students will be able to get the knowledge about Warm up and cooling down, other specialized training for women.	Understand
CO3:	student will get knowledge about Common Importance of conditioning for cardiac patients and persons with special needs	Apply
CO4:	students will able to handle cardiac patients and special need peoples.	Skill
CO5:	students will be able to create the training program to all age categories peoples.	Skill

b.Syllabus

Unit-I: Training Youth

Benefits of Strength Training, Guidelines for Children Resistance Training Program, Age Group Strength Programs 7-9 Yrs, 10-12 Yrs And 13-15 Yrs Old, Determining Individual Needs, The Need Analysis, Assessing Upper Body Strength, Lower Body Strength and Designing Resistance Program for Youth.

Unit-II: Training Women

Functional training based on metabolic equivalence, weight training, advantages of strength training for women, pitfalls of strength training, Exercises for Upper and lower body through own body weight, barbell, dumbbell, Swiss ball, kettle bell and machine exercises. Exercises for core, designing resistance program for women, Exercise during pregnancy, pre and post Natal exercises, Indications and contraindications.

Unit-III: Training Older Adults

Advantages of strength training for old adults, Exercises for Upper and lower body own body weight, barbell, dumbbell, machine exercises, Exercises for core, Prevention of Falls among elderly, Indications and contraindications.

Unit-IV: Training Cardiac Patients and Persons with Special Needs

Importance of conditioning for cardiac patients, selection of exercises, Conditioning for disabled, need and importance of conditioning for disabled, conditioning with cerebral palsy, stroke and head injury, conditioning with spinal cord injuries, conditioning with other physical disabilities: Visual impairment, multiple sclerosis, post-polio syndrome.

Unit-V: Guidelines for Training Program

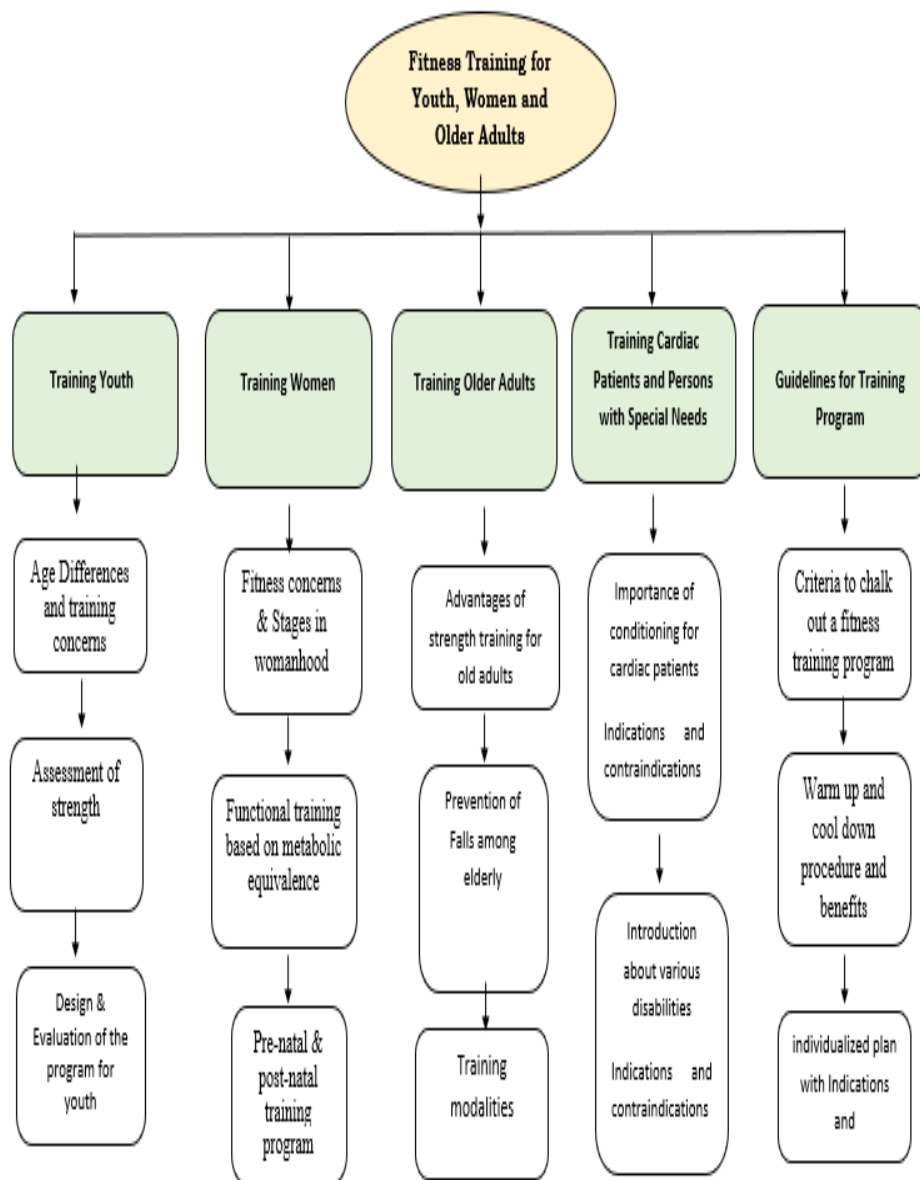
Guidelines for Children Resistance Training Program and Designing Resistance Program for Youths, Designing resistance program for women, Exercise during pregnancy, pre and post Natal exercises. Advantages of strength training for old adults, Importance of conditioning for cardiac patients and selection of exercises for youth, women, old adults and cardiac patients, individualized plan with Indications and contraindications

References:

- Lewis-McCormick, Irene. *A Woman's Guide to Muscle and Strength*. Human Kinetics, 2012.
- Inclendon, Lori. *Strength training for women*. Human kinetics, 2005.
- Boyle, Michael. *New functional training for sports*. Human Kinetics, 2016.
- Kraemer, William J., and Steven J. Fleck. *Strength training for young athletes*. Human Kinetics, 2005.
- Faigenbaum, Avery D., and Wayne L. Westcott. "Strength & power for young athletes." (No Title) (2000).
- Graves, James E., and Barry A. Franklin. *Resistance training for health and rehabilitation*. Human Kinetics, 2001.
- Lockette, Kevin F., and Ann M. Keyes. "Conditioning with physical disabilities." (No Title) (1994).
- Lloyd, Rhodri S., and Jon L. Oliver, eds. *Strength and conditioning for young athletes: science and application*. Routledge, 2019.
- Zatsiorsky, Vladimir M., William J. Kraemer, and Andrew C. Fry. *Science*

c. Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	3	2	2
CO3	3	3	3	3	3
CO4	3	2	3	3	3
CO5	3	3	3	3	3



Semester II

P.G. Diploma in Fitness Management

PES4024

PRACTICUM -II

Course Objective

To acquire basic knowledge about various training, recover measures and test and measurement for physical fitness

a. Course Outcomes

	Course Outcomes	Level
CO1:	Students will be able to understand the importance of various test and assessments.	Understand and skill
CO2:	Students will be able to know recovery indicators and measures	Understand
CO3:	Students will gain confidence of performing various strength training means	Skill
CO4:	Students will gain expertise in handling core exercises	Skill
CO5:	Students will gain expertise in demonstration of plyometrics	Skill

b. Syllabus:

Unit-I: Testing and evaluation

Health-related physical fitness tests and assessments of functional and muscular fitness.

Unit 2: Training and recovery:

Interval training, cardio respiratory conditioning and Recovery indicators and Recovery measures.

Unit 3: Means of strength training

Exercises for Upper and lower body own body weight, barbell, dumbbell, Swiss ball, kettle bell and machine exercises

Unit 4: Exercises for core

Core exercises with and without apparatus (standing, Sitting and lying), swinging exercise and Core stimulation.

Unit 5: Plyometrics

Simple and High powered plyometrics; Own body weight, hopping, bounding, hurdles and drop jumps

References:

- American College of Sports Medicine. ACSM's resource manual for guidelines for exercise testing and prescription. Lippincott Williams & Wilkins, 2012.
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Scheme of Examination:

Maximum Marks	- 100 marks
Internal Assessment (Practical)	- 50 Marks
Demonstration	- 20 Marks
Explanation	- 20 Marks
Technique Proficiency	- 10 Marks
Semester Examination	- 50 Marks
Technique Proficiency	- 10 Marks
Demonstration	- 20 Marks
Explanation	- 20 Marks

c.Mapping of program outcomes with course outcomes

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	2	3	2	3
CO5	3	3	3	3	3