

# ANDHRA UNIVERSITY

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All Official letters, packages  
etc, should be addressed to  
the Registrar by designation  
and not by name

No. L.II (3)/Phy.Edn.&Sports Sci./2019

Visakhapatnam,  
Dt. 21-05-2019.

From: **THE REGISTRAR**

To

The Chairman,  
P.G. Board of Studies,  
Department of Physical Education & Sports Sciences,  
College of Arts & Commerce,  
Andhra University,  
Visakhapatnam.

Sir,

Sub: Introduction of 3 months Certificate Course named as "Fitness Trainer" for Defence Personnel under Skill Development Programme from the academic year 2018-19 - Approved - Reg.

Ref: 1. Minutes of the P.G. Board of Studies in Physical Education & Sports Sciences held on 20-07-2018.  
3. Minutes of the meeting of the Academic Senate held on 28-03-2019 (Item No. 2)

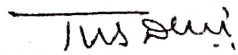
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With reference to the above, I am by direction to inform that introduction of 3 months Certificate Course named as "Fitness Trainer" for Defence Personnel under Skill Development Programme from the academic year 2018-19 in the Department of Physical Education & Sports Sciences has been approved.

Hence, I request you to arrange to circulate the same among the Teaching staff and students concerned.

Thanking you,

Yours faithfully,

  
(T.V.SATYAVATHI DEVI)  
DEPUTY REGISTRAR (ACADEMIC)

**Copies to :**

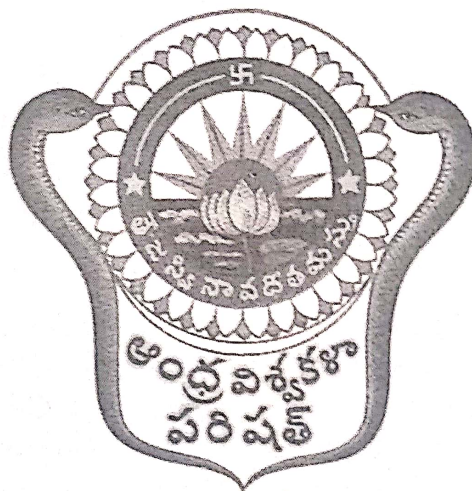
1. The Head of the Department of Physical Education & Sports Sciences, A.U., Visakhapatnam.
2. The Dean, Academic Affairs, Andhra University, Visakhapatnam.
3. The Superintendents of E-VII & S I Sections, Andhra University, Visakhapatnam.
4. The Honorary Director, Computer Centre, Andhra University, Visakhapatnam.
5. O.C. & O.O.F.

# **SKILL DEVELOPMENT PROGRAMME FOR DEFENCE PERSONNEL**

## **FITNESS TRAINER CERTIFICATE COURSE 2018-2019**

**DEPARTMENT OF PHYSICAL EDUCATION & SPORTS SCIENCES  
ANDHRA UNIVERSITY, VISAKHAPATNAM**

*Applicable to the students admitted from 2018-19 academic year onwards*



**ANDHRA UNIVERSITY  
VISAKHAPATNAM**



# **SKILL DEVELOPMENT PROGRAMME FOR DEFENCE PERSONAL FITNESS TRAINER CERTIFICATE COURSE (THREE MONTHS) SYLLABUS, RULES AND REGULATIONS**

## **Preamble:**

Physical fitness is a state of health and well-being and, more specifically, the ability to perform aspects of sports, occupations and daily activities. Physical fitness is generally achieved through proper nutrition, moderate-vigorous physical exercise, and sufficient rest.

Before the industrial revolution, *fitness* was defined as the capacity to carry out the day's activities without undue fatigue. However, with automation and changes in lifestyles *physical fitness* is now considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypokinetic diseases, and to meet emergency situations.

## **Controlling blood pressure**

Physical fitness has proven to result in positive effects on the body's blood pressure because staying active and exercising regularly builds up a stronger heart. The heart is the main organ in charge of systolic blood pressure and diastolic blood pressure. Engaging in a physical activity will create a rise in blood pressure, once the activity is stopped, however, the individual's blood pressure will return to normal. The more physical activity that one engages in, the easier this process becomes, resulting in a more 'fit' individual. Through regular physical fitness, the heart does not have to work as hard to create a rise in blood pressure, which lowers the force on the arteries, and lowers the overall blood pressure.

## **Immune system**

Physical activity boosts the immune system. This is dependent on the concentration of endogenous factors (such as sex hormones, metabolic hormones and growth hormones), body temperature, blood flow, and hydration status and body position. Physical activity has shown to increase the levels of natural killer (NK) cells, NK T cells, macrophages, neutrophils and eosinophils, complements, cytokines, antibodies and T cytotoxic cells. However, the mechanism linking physical activity to immune system is not fully understood.

## **Weight control**

Achieving resilience through physical fitness promotes a vast and complex range of health related benefits. Individuals who keep up physical fitness levels generally regulate their distribution of body fat and stay away from obesity. Abdominal fat, specifically visceral fat, is most directly affected by engaging in aerobic exercise. Strength training has been known to increase the amount of muscle in the body; however it can also reduce body fat. Sex steroid hormones, insulin, and an appropriate immune response are factors that mediate metabolism in relation to the abdominal fat. Therefore, physical fitness provides weight control through regulation of these bodily functions.



## **Menopause and physical fitness**

Menopause is the term that is used to refer to the stretch of both before and after a woman's last menstrual cycle. There are an instrumental amount of symptoms connected to menopause, most of which can affect the quality of life of the women involved in this stage of her life. One way to reduce the severity of the symptoms by doing exercise and keeping a healthy level of fitness. Prior to and during menopause as the female body changes there can be physical, physiological or internal changes to the body. These changes can be prevented or even reduced with the use of regular exercise.

## **Mental Health**

Studies have shown that physical activity can improve people's mental health and well-being. This improvement is due to an increase in blood flow to the brain and the release of hormones. Being physically fit and working out on a consistent and constant basis can positively impact one's mental health.

## **General Objective of the Course:**

### **To enable the student:**

- a) To become competent and committed professionals willing to perform the identified tasks
- b) To use competencies and skills needed for becoming an effective adventure instructor
- c) To inculcate rational thinking and scientific temper among the students
- d) To Develop critical awareness about the social realities among the students
- e) The objective of the course is to provide students with a supervisory professional experience and to gain expertise in fitness training.

**Name of the Course:** Fitness Trainer

**Duration of the Course:** The duration of the course Three months

### SCHEME OF EXAMINATIONS:

S.No.	Theory Papers	Course Code	Duration	Internal Assessment Marks	Theory Examination Marks	Total Marks
01.	Fitness and Life Style Management	CFT 101	3 hrs	30	70	100
02.	Injuries & Rehabilitation	CFT 102	3 hrs	30	70	100
03.	Yoga & Stress Management	CFT 103	3 hrs	30	70	100
04.	<b>Practicals:</b> Training Methods & Aerobics	CFT 104	3 hrs	30	70	100
05.	<b>Practicals:</b> Track & Field	CFT 105	3 hrs	30	70	100
<b>Total:</b>						<b>500</b>

### Question Paper Pattern (Theory & Practicals) :

#### **Theory:**

**University Examination 70 marks** - Answer any FIVE questions out of EIGHT.  
Each question carries 14 marks

**Internal Assessment 30 marks** - One Internal Assessment examination – Answer any 5 out of 8 questions. Each questions carries 6 marks.

#### **Practicals:**

**University Examination 70 marks** - One practical examination in Skill tests with Viva-voce

**Internal Assessment 30 marks** - One practical examination in Skill tests with Viva-voce

Percentage	Description	Classification of final result
70 % & above	Outstanding	Distinction
60 – 69%	Very Good	First Class
50 – 59%	Good	Second Class
50% below	Above average	Third Class
40%below	Fail	Dropped



# SYLLABUS

## Paper-I : Fitness and Life Style Management

### Unit- I

Concept of Fitness Definition and meaning of Fitness, Different Kinds of fitnesses, Physical Fitness, Skill Related and Health Related fitness Diabetes, Hypertension, Arthritis. Scientific Principles of Exercise: Introduction, Progressive over load, Specificity of training

### Unit -II

Meaning of Health, Body Compositions, Benefits of Health fitness Components: Obesity, Meaning of Obesity and risk factors, Obesity and over fatness. Cardiovascular fitness program, resistance training programme. Cardio Vascular, Fitness, Muscular Endurance, strength, flexibility, agility.

### Unit-III

Nutrition: base for human performance-Carbohydrates, Fats and Proteins. Vitamins, Minerals and Water.

### References:

1. Lifestyle management in Health and Social care, Merinda Thew and Jim McKenna, Blackwell Publishing, United Kingdom.
2. Predicting Health behavior, Mark Connor and Paul Norman, Open University Press, Buckingham, UK.
3. Health Behavior and health education: Theory, research and Practice, Karen Glanz, Barbara Rimer, Viswanath, John Wiley and sons, USA. (Free pdf book)
4. Human Body Composition, Steven B Heymstead, Timothy Lohan, Zimian Wang, Scott B Going, Human Kinetics, USA.
5. Science of Flexibility, Michael J Alter, Human Kinetics, USA.
6. Applied Body Composition Assessment, Vivian H Heyward, Dale R Wagner, Human Kinetics, USA.
7. Coping with life stress-the Indian experience, Meena Hariharan, Amazon Books.
8. Stress Management-a Wellness approach, Nanette E Tummers, Human Kinetics, USA.
9. Wellness Workbook: How to achieve enduring health and vitality, John W Travis and Regina S Ryan, Crown publishing, New York.
10. The Soul of Wellness: 12 holistic principles for achieving a healthy body, mind, heart and spirit, Rajiv Parti, Selectbook incorporation, New York.
11. Wellness coaching for lasting Lifestyle change, Michael Arloski, Whole person associates, Duluth, USA.
12. Staying Healthy with Nutrition: The complete guide to Diet and Nutritional medicine, Elson M Has.

## Paper-II :

## INJURIES AND REHABILITATION

**Unit I-Introduction:** Fundamental movements of human body, different types of postures: good and bad postures. , Deviations in posture: Kyphosis, lordosis, flat back, Scoliosis, round shoulders, Knock Knees, Bowlegs, Flatfoot.

**Unit II – Injuries:** Injuries: acute, sub-acute, chronic. Advantages and Disadvantages of PRICE (Protection, Rest, Ice, Compression, Elevation). DRABC (Danger, Respond, Airway, Breathing, Circulation) action plan.

### Unit III –Rehabilitation Exercises & Massage

Passive, Active, Assisted, Resisted exercise for Rehabilitation, Stretching, PNF techniques And principles. Gait training, Swiss and medicine ball exercises. Classification of Massage, Stroking manipulation: Effleurage, Pressure manipulation: Petrissage Kneading (Finger, Kneading, , Circular) Percussion. Manipulation: Tapotement, Hacking, Clapping, Beating, Pounding, Slapping, Cupping, Poking, and Shaking.

## REFERENCES:

- Doherty. J.Meno.Wetb, Moder D(2000) Track& Field,EnglewoodCliffs,Prentice HallInc.  
Lace, M. V. (1951) Massage and Medical Gymnastics, London: J & A Churchill Ltd.  
McOoyandYoung(1954)TestsandMeasurement,NewYork:AppletonCentury.Naro,C. L.  
(1967)ManualofMassageand,Movement,London:FebraandFebraLtd.Rathbome,J.I.  
(1965)CorrectivePhysical education,London:W.B.Saunders&Co.StaffordandKelly, (1968)  
Preventive and Corrective Physical Education, New York.



## Paper-III:

## Yoga & Stress Management

### Unit I – Introduction

Meaning, Definition, Scope and importance of Yoga, Essentials for Yoga Practices; Age, Diet, Stomach emptying bowels, bathing, Sequence. Contraindication, Counter Pose, Inverted Asana, Breathing,

**Unit II – Meditation:** Meaning, Definition and Benefits. Types of Meditation: Passive, active, Saguna and Ningana Meditation. Meditation and Health, Meditation and stress.

**Unit III – Stress Management:** Stress-meaning and types of stress, Physical and mental stress-Harmful effects of overtraining and excessive exercise on health,-mental stress and painful effects of mental stress on health. Anxiety, Depression, insomnia.

### REFERENCE:

- George Feuerstein, (1975). Text Book of Yoga. London: Motilal Bansaridass Publishers (P) Ltd.  
Gore, (1990), Anatomy and Physiology of Yoga Practices. Lonavata: Kanchan Prakashan. Helen Purperhart (2004), The Yoga Adventure for Children. Netherlands: A Hunter House book.  
Iyengar, B.K.S. (2000), Light on Yoga. New Delhi: Harper Collins Publishers.  
Karbalkar N.V. (1993) Patanjali Yogasutra Bhashya (Marathi Edition) Amravati: Hanuman Vyayam Prasarak Mandal  
Kenghe, C.T. (1976). Yoga as Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: Bharata Manishai.  
Kuvayananada Swami & S.L. Vinekar, (1963), Yogic Therapy – Basic Principles and Methods. New Delhi: Govt. of India, Central Health Education and Bureau.  
Moorthy A.M. & Alagesan, S. (2004) Yoga Therapy. Coimbatore: Teachers Publication House.  
Swami Kuvalayanda, (1998), Asanas. Lonavala: Kaivalyadhama.  
Swami Satyananada Sarasvati. (1989), Asana Pranayama Mudra Bandha. Munger: Bihar School of Yoga. Swami Satyananda Sarasvathi. (1984), Kundalini and Tantra, Bihar: Yoga Publications Trust.  
Swami Sivananda, (1971), The Science of Pranayama. Chennai: A Divine Life Society Publication. Thirumalai Kumar. S and Indira. S (2011) Yoga in Your Life, Chennai: The Parkar Publication.  
Tiwari O.P. (1998), Asanas-Why and How. Lonavala: Kaivalyadhama.  
Satya Murty, K., *Elements of Yoga, Vedadri Brahma Gnana Kendra, Pedakakani, Guntur, India, (2015)*

### Practicals

#### Track & Field:

Technique involved in Sprints, Middle distance, Long distance, Relays and Hurdles, Specific Exercises, Throws, Jumps and Drills for Track & Field Events.

#### Training Methods:

Speed, Factors influencing speed, General endurance, Strength training, Agility, Flexibility.