

Semester – III
PART – A: THEORY ELECTIVE COURSE
BTE-301: SPORTS MEDICINE, PHYSIOTHERAPY AND REHANLITATION
(ELECTIVE)

Credit			Teaching Hours			Assessment		
L/T	P/I	Total	L/T	P/I	Total	Int.	Ext.	Total
4	-	4	64	-	64	30	70	100

Lecture/Tutorials, P/I=Practical/Internship, Int.=Internal, Ext.=External

ESSENCE OF THE COURSE

This course will enable students to understand the modern concept of sports medicine. It aims to develop understanding about the aim and objectives of sports medicine, athletes care and rehabilitation, prevention of injuries in sports, guiding principles of therapeutic modalities.

COURSE LEARNING OUTCOME

After completing this course, the students will be able to

- Outline the objectives of sports medicine and rehabilitation in athletic performance.
- take care of the preventive and curative aspect of sports injuries.
- Apply the concept of rehabilitation exercise in post injury care.
- realize and apply different modalities of therapy.

COURSE CONTENTS

Unit-I: - Sports Medicine:

- Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance.
- Athletes Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches.
- Need and Importance of the study of sports injuries in the field of Physical Education
- Prevention of injuries in sports – Common sports injuries – Diagnosis

Unit-II: Physiotherapy

- Definition – Guiding principles of physiotherapy, Importance of physiotherapy, Introduction and demonstration of treatments - Electrotherapy – infrared rays – Ultraviolet rays –short wave diathermy – ultrasonic rays.

Unit-III: Hydrotherapy:

- Introduction and demonstration of treatments of Cry therapy, Thermo therapy, Contrast Bath, Whirlpool Bath – Steam Bath – Sauna Bath – Hot Water Fomentation – Massage: History of Massage – Classification of Manipulation (Swedish System) physiological Effect of Massage.

Unit-IV: Therapeutic Exercise:

- Definition and Scope – Principles of Therapeutic Exercise – Classification, Effects and uses of Therapeutic exercise – passive Movements (Relaxed, Forced and passive - stretching) – active movements (concentric, Eccentric and static) application of the

therapeutic exercise: Free Mobility Exercise – Shoulder, Elbow – Wrist and Finger Joints – Hips, Knee, ankle and Foot joints – Trunk. Head and Neck exercises.

TEACHING LEARNING STRATEGIES

- The content of the syllabus may be taught by using lecture method, discussion method, quiz method, educational videos, charts and assignment method depending upon the resources and facilities available at the University/Institute/ Department/Colleges.

MODE OF TRANSACTION

- Laboratory Work/Project Work/Viva/Seminars/Term Papers/Presentations/Self- Learning Instructional Material etc.

ASSESSMENT RUBRICS

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| • End Semester Exam | Marks: 100 (70+30)
Marks: 70 |
| • Classroom Test, Project Work, Assignments, Presentations | Marks: 30 (10+20) |
| ○ Classroom Tests: Best one out of two unit tests | (Marks: 10) |
| ○ Project Work, Assignments, Presentations | (Marks: 20) |

SUGGESTED READINGS

Christine, M. D., (1999). *Physiology of sports and exercise*. USA: Human Kinetics.

Conley, M. (2000). *Bioenergetics of exercise training*. In T.R. Baechle, & R.W. Earle, (Eds.), *Essentials of Strength Training and Conditioning* (pp. 73-90). Champaign, IL: Human Kinetics.

David, R. M. (2005). *Drugs in sports*, (4th Ed). Routledge Taylor and Francis Group.

Hunter, M. D. (1979). *A dictionary for physical educators*. In H. M. Borrow & R. McGee, (Eds.), *A Practical approach to measurement in Physical Education* (pp. 573-74). Philadelphia: Lea & Febiger.

Jeyaprakash, C. S., *Sports Medicine*, J.P. Brothers Pub., New Delhi, 2003.

Khanna, G. L., (1990). *Exercise physiology & sports medicine*. Delhi: Lucky Enterprises.

Mathew, D. K. & Fox, E. L., (1971). *Physiological basis of physical education and athletics*. Philadelphia: W.B. Saunders Co.

Pandey, P. K., (1987). *Outline of sports medicine*, New Delhi: J.P. Brothers Pub.

Williams, J. G. P. (1962). *Sports medicine*. London: Edward Arnold Ltd.