



**BHARATHIDASAN UNIVERSITY**

**Tiruchirappalli- 620024,  
Tamil Nadu, India**

**Department of Physical Education and Yoga**

**Course Title : SPORTS BIOMECHANICS AND KINESIOLOGY**  
**Course Code : 21MPE22**

**Unit- (V)**

**Dr. M. RAJESWARI,  
Dr.V.SANKARALINGAM  
GUEST LECTURER**

# Movement Analysis

- A description of the actual actions which occur at the joints involved
- The plane(s) in which the movement occurs
- The muscles producing the movement
- The function of the muscles involved (agonists, antagonists, synergists & fixators)
- The type of contraction (isotonic - concentric or eccentric, isometric)  
The range of the muscle action (inner, middle, outer)

# Analysis of movement

- **preparation** – the movements an athlete makes while preparing to perform the skill
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- **execution** – the movements made while performing the main part of the skill
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- **recovery** – the movements that allow an athlete to regain balance and/or position after performing the skill (sometimes in order to go into action with another performance)
- As sports movements are complex, each phase is often divided into sub-phases. For example:

# Types of Movement analysis

- Kinesiological Analysis
- Biomechanical Analysis
- Cinematographic Analysis

# Methods of Movement Analysis

- **Biomechanical Analysis**
- **Cinematographic Analysis**
- **Kinesiological Analysis:**