



UNIVERSITY OF PATANJALI

## ANNEXURE-I

Syllabus of ODL Course  
M.Sc. (Yoga Science)

# Semester-1

Course Details-1  
Subject Name-Insights into Indian Philosophy  
Subject Code-(MSY-CT-101)

CREDIT: 4	CA: 30	SEE: 70	MM: 100
-----------	--------	---------	---------

### Course Objectives:

Following the completion of this course, students shall be able to

- To outline the six systems of Indian philosophy.
- To explain the understanding of Yoga as a philosophy and inculcate the essence.
- To describe the various schools of philosophy like Buddhism, Samkhya, Mimamsa etc. which are relevant to yoga practice.

### Course Outcomes (COs):

After going through this course, learners are expected to

- Review basics of Indian Philosophy.
- Interpret yoga Philosophy.
- Discuss life problems in connection to Indian Philosophy

	<b>BLOCK 1 Nyaya and Vaisesika Philosophy</b>
<b>UNIT 1</b>	Nature and Core Concepts: Nature of physical world, Concept of Individual soul, supreme soul, and liberation in Indian philosophy, Theory of body, mind and soul
<b>UNIT 2</b>	Nyaya Philosophy: The sixteen Padarthas according to Nyaya, Concept of Nyaya philosophy, Means and objects of knowledge and salvation according to Nyaya
<b>UNIT 3</b>	Vaisesika Philosophy: Means and objects of knowledge and salvation according to Vaisesika, Category of substance – Nava dravyas, Category of quality – 24 gunas, Relation between Nyaya and Vaisesika philosophy
	<b>BLOCK 2 Samkhya and Yoga Philosophy</b>
<b>UNIT 1</b>	Core Concepts of Samkhya: Theory of cause and effect, Prakriti and Purusha, Concept and Process of evolution and Liberation, Concept of Atman, Brahma, Maya, Universe, God
<b>UNIT 2</b>	Samkhya Theory and Epistemology: Three fold afflictions and means to overcome afflictions, Twenty five entities and means of knowledge according to Samkhya, Saakarya Vada, Similarities and dissimilarities between Vyakta and Avyakta, Triguna, Existence of Purusa, plurality of Purusa, proximity of Purusa and Prakriti, Karana, Antah Karana and Bahya Karana according to Sankhya Karika, Liberation and means of attaining it.
<b>UNIT 3</b>	Yoga Philosophy (Patanjali Yoga Sutras): Organization of the Yoga sutras, Stages of Chittas, forms of Chitta, modification of Chittas, Kind of Kleshas, The eight fold of Yoga, God and liberation
	<b>BLOCK 3 Mimamsa Philosophy (Purva and Uttara)</b>
<b>UNIT 1</b>	Uttaramimamsa (Vedanta): Concept of Badarayana in Uttaramimamsa, Anumana, Sabda, Difference between vidya & avidya, subject & object, creation & causation, cause & effect, Pratyaksa, Anumana, Upamana, Arthapati, Anupalabdi and Sabda according to Uttaramimamsa
<b>UNIT 2</b>	Purvamimamsa: Atheism, Dharma in the context of Purvamimamsa, Major teachings of Mimamsa system



<b>UNIT 3</b>	Applications and Ethical Teachings: Summary of ten Upanisads, Atman, Brahma, Maya, Universe, God, The self and human life, Selfless action, nonattachment, self-control, self-discipline, Daily schedule for psychophysical wellbeing, social awareness, sense of equality, unity with diversity, selectiveness
<b>BLOCK 4 Heterodox Schools of Indian Philosophy</b>	
<b>UNIT 1</b>	Carvaka Philosophy: Origin and history of Carvaka philosophy, Metaphysics and Epistemology
<b>UNIT 2</b>	Jain Philosophy: Categories, Triratnas, Syadvada
<b>UNIT 3</b>	Buddhist Philosophy: Four noble truths, Pramana

### Reference Books:

1. Bhushan, N., & Garfield, J. L. (2015). Indian Philosophy in English: From Renaissance to Independence. Indian Philosophy in English: From Renaissance to Independence. doi:10.1093/acprof:osobl/9780199769261.001.0001
2. Bhushan, N., & Garfield, J. L. (2017). Minds Without Fear: Philosophy in the Indian Renaissance. New York, NY: Oxford University Press.
3. Bilimoria, P. (2015). Nature in Indian Philosophy and Cultural Traditions. Sophia Studies in Cross-cultural Philosophy of Traditions and Cultures (Vol. 12). New Delhi, India: Springer. doi:10.1007/978-81-322-2358-0
4. Frauwallner, E. (1973). History of Indian Philosophy, ( Vol 2. Varanasi, India: Motilal Banaridass Publishers.
5. Gupta, B. (2012). An Introduction to Indian Philosophy: Perspectives on Reality, Knowledge, and Freedom. New York, NY: Routledge. doi:10.5840/ipq197717452
6. Hiriyanna, M. (1994). Outlines of Indian Philosophy. Varanasi, India: Motilal Banaridass Publishers.
7. I, B. S., Potter, K. H., Larson, G. J., Bhatlacharya, R. S., Philosophy, B., Karl, A. D. E., et al. (1995). Encyclopedia of Indian Philosophies.
8. Mohanty, J. N. (2008). A History of Indian Philosophy. A Companion to World Philosophies, 24–48. doi: 10.1002/9781405164566.ch2

9. Potter, K. H. (1987). Encyclopedia of Indian Philosophies Vol IV. Delhi, India: Motilal Banaridass Publishers.
10. Press, O. U. (1928). Indian Philosophy: A Very Short Introduction. Mind (Vol. 37). doi:10.1093/mind/XXXVII.145.130
11. Radhakrishnan, S., & Moore, C. A. (Eds.). (1957). A Source Book in Indian Philosophy. New Jersey, NJ: Princeton University Press.
12. Schweizer, P. (1993). Mind/Consciousness Dualism in Sankhya-Yoga Philosophy.

**Course Details-2**  
**Subject Name- Yoga Strategic Management**  
**Subject Code-(MSY-CT-102)**

<b>CREDIT: 4</b>	<b>CA: 30</b>	<b>SEE: 70</b>	<b>MM: 100</b>
------------------	---------------	----------------	----------------

### Course Objectives:

Following the completion of the course, students shall be able to:

- To record the complexities of managing a formal organization.
- To identify key strategic issues and formulating appropriate strategies given a firms' situation.
- To explain meaning and need for strategic management.
- To interpret the Indian ethos and their need for holistic globalization
- To conceptualize the need for Indian models and significance.
- To recognize the need for corporate responsibility.

### Course Outcomes (COs):

After study of this course, a learner is expected to have

- Basic understanding of strategic management from modern and classical perspective.
- Skills of drafting vision mission and process of strategic management from yogic perspective.
- Skills for internal and external assessment of business strategies.
- Aptitude of applying yogic principles and practices for strategic management and ethical business.



	<b>BLOCK 1 Foundations of Strategic Management</b>
<b>UNIT 1</b>	Meaning of Strategy
<b>UNIT 2</b>	Strategic Management-Meaning, Definition, Role, Scope, Importance, Stages, Key Terms, and SM Model
<b>UNIT 3</b>	Strategic Planning-Benefits, Need, Pitfalls, Avoidance by Firms, Guidelines for Yogic Approach, and Key Success Factors
	<b>BLOCK 2 Vision, Mission, and Strategic Analysis</b>
<b>UNIT 1</b>	Yogic Vision and Mission-Need, Meaning, Importance, Vision vs. Mission
<b>UNIT 2</b>	Process, Characteristics, Components of Vision and Mission
<b>UNIT 3</b>	Writing and Evaluating Yogic Vision and Mission Statements
	<b>BLOCK 3 Strategic Assessment and Formulation</b>
<b>UNIT 1</b>	Internal Assessment -Key Internal Forces, Internal Audit Process, Functional Areas
<b>UNIT 2</b>	External Assessment-Key External Forces, Sources, Porter's Five Forces, Cooperative vs. Competitive Strategies
<b>UNIT 3</b>	Business Strategies-Generic Competitive Strategies, Diversification, Core Competencies, Outsourcing, Integration, Joint Ventures, and SM in Various Organizations
	<b>BLOCK 4 Yogic Approach and Ethics in Strategic Management</b>
<b>UNIT 1</b>	Importance of Ethics in Strategic Management
<b>UNIT 2</b>	Yogic and Ethical Strategic Management – Convergence of Western and Eastern Practices
<b>UNIT 3</b>	Compassionate Leadership, Balancing Purusharthas, and Evolution of the SELF

## Reference books:

1. Swami Amritaswarupananda Puri. *Color of the Rainbow – Compassionate Leadership*.
2. Hartman, L.P., & Chatterjee, A. *Perspectives in Business Ethics* (3rd ed.). Tata McGraw Hill.
3. *Implementation and Control* (9th ed.). Tata McGraw Hill.
4. Pearce, J.A. II, & Robinson, R.B. Jr. *Strategic Management: Formulation*. M.A. Center, 2013.
5. Worth, M.J. *Non-profit Management – Principles and Practice*. The George Washington University. ISBN 9781412937788. Sage Publications, September 2008.
6. Routes. *New Age International Publishers*, New Delhi.
7. Sharma, Subhash. *New Mantras in Corporate Corridors: From Ancient Roots to Global Vision*.
8. Srinivasan. *Strategic Management – Indian Context*. Prentice Hall of India.
9. Anokhin, S. (2006). *Empirical Essays on Corporate Innovation: Untangling the Effects of Corporate Venture Capital*, p. 145. Available at: [http://rave.ohiolink.edu/etdc/view?acc\\_num=case1152821357](http://rave.ohiolink.edu/etdc/view?acc_num=case1152821357)

### Course Details-3

Subject Name- Application of Hatha yoga  
Subject Code-(MSY-CT-103)

CREDIT: 4	CA: 30	SEE: 70	MM: 100
-----------	--------	---------	---------

## Course Objectives:

Following the completion of this course, students shall be able to-

- To apply Hatha Yoga related principles and practices in biopsychosocial contexts.
- To cultivate self-discipline, body awareness, and breath control through regular Hatha Yoga practice.



- To create value and insights of Hatha Yoga for persons with special need.

## Course Outcomes (COs):

After going through this course, learners are expected to-

- Explain key Hatha Yoga concepts demonstrate their significance in promoting holistic well-being.
- Demonstrate Hatha yoga practices.
- Prescribe hatha yoga practice for stress management, behavior moderation, performance excellence, health promotion, disease prevention and therapy.

	<b>BLOCK 1 Foundations and Applications of Hatha Yoga in Stress and Personality Development</b>
<b>UNIT 1</b>	Holistic Hatha Yogic Approach to Stress Prevention and Management- Shat kriyas (cleansing techniques), Asanas (postures) for strength and stamina, Bandhas and mudras (locks and gestures), Pranayama (breath regulation), Dharana and dhyana (concentration and meditation)
<b>UNIT 2</b>	Hatha Yoga for Physical, Pranic, and Mental Well-being- Physical level: slim body, beauty, digestive health, disease-free state through yogic diet and shat kriyas, Prana level: purification of nadis, mastery over prana via mudras, bandhas, and pranayama, Mental level: personal and social discipline through yama, niyama, pratyahara, dharana, dhyana, and samadhi
<b>UNIT 3</b>	Hatha Yoga for Emotional and Spiritual Health- Emotional level: mastery over emotions (anger, anxiety, fear, depression) via Ishwara Pranidhana, Social and civic sense: environmental awareness, unity with the universe (yujyate anena iti yogah), Spiritual health: bliss and equanimity through higher states of meditation
	<b>BLOCK 2 Ashtanga Yoga and Integrated Approaches in Stress and Personality Management</b>
<b>UNIT 1</b>	Core Concepts of Patanjali Yoga for Stress Reduction-Chitta Vritti Nirodha: Abhyasa and Vairagya, Four-fold attitude for Chitta prasadanam, Ashtanga Yoga: Yama, Niyama, and Pratyahara

<b>UNIT 2</b>	Hatha Yogic Contributions to Personality Development-Physical level: yogic diet, Shat kriyas, asanas, Prana level: cleansing and control via pranayama, mudras, bandhas, Mental level: discipline, concentration, intellectual growth through meditative practices
<b>UNIT 3</b>	Emotional and Spiritual Development through Integrated Yoga- Emotional control: preventing negative emotions through surrender and self-awareness, Social awareness and universal connection, Spiritual practices: advanced meditation, prayer, selfless service, Nad
<b>BLOCK 3 Hatha Yoga and Sports Performance Enhancement</b>	
<b>UNIT 1</b>	Physical and Vital Benefits of Hatha Yoga in Sports-Physical stamina, strength, endurance, muscle tone, flexibility via asanas, kriyas, diet, Internal cleansing for recovery, Pranayama for enhanced lung capacity
<b>UNIT 2</b>	Mental and Emotional Training for Athletes through Yoga-Concentration, mental clarity, focus, Ego reduction, positive qualities, emotional balance, Breathing techniques and meditation for calmness
<b>UNIT 3</b>	Cognitive and Spiritual Dimensions of Sports Yoga-Enhancement of cognitive abilities: focus, creativity, willpower, Sports as a medium for spiritual awareness and inner growth
<b>BLOCK 4 Yoga for Children and Rehabilitation</b>	
<b>UNIT 1</b>	Understanding Special Needs in Children-Assessment of cognitive, emotional, physical needs, Overview of conditions: Down syndrome, cerebral palsy, autism, learning disabilities, visual/hearing/speech impairments
<b>UNIT 2</b>	Integrated Yoga Modules for Children with Special Needs-Tailored yoga practices for cognitive and motor skills enhancement, Emotional and behavioral support through yoga, Adaptations of Hatha Yoga for different disabilities
<b>UNIT 3</b>	Yoga for Physical Fitness and Self-Confidence in Children, Practices for strength, endurance, speed, agility, flexibility, Enhancing self-confidence through regular yoga routines, Supportive environment and structured progress





## Reference books:

1. Gharote, M. L. (2009). *Hatharatnavali* (2nd ed.). Lonavala, Pune: The Lonavala Yoga Institute.
2. Gharote, M. M. (2010). *Therapeutic References in Traditional Yoga Texts*. Lonavala: The Lonavala Yoga Institute.
3. Iyengar, B. K. S. (1982). *Light on Yoga*. Yoga Dipika. <https://doi.org/10.1007/s13398-014-0173-7.2>
4. Iyengar, B. K. S. (2001). *Yoga: The Path to Holistic Health* (1st ed.). London, Great Britain: Dorling Kindersley.
5. Iyengar, B. K. S. (2005). *The Illustrated Light on Yoga* (10th ed.). New Delhi: HarperCollins Publishers India.
6. Long, R. (2008). *The Key Muscles of Hatha Yoga*.
7. Muktibodhananda, S. (2006). *Hatha Yoga Pradipika: Light on Hatha Yoga* (3rd ed.). Munger, India: Yoga Publications Trust. <https://doi.org/10.1098/rsta.2012.0199>
8. Rieker, H.-U. (1992). *Hatha Yoga Pradipika*. Detroit, MI: The Aquarian Press. Retrieved from: <http://www.hermetics.org/pdf/HathaYogaPradipika.pdf>
9. Rukmini, T. S. *Yoga Vartika of Vijñānabhikṣu* (Tr.). Vols. I–IV. New Delhi: Munshiram Manoharlal Pvt. Ltd.
10. Saraswati, S. S. (1995). *Asana, Pranayama, Mudra and Bandha*. Munger, India: Bihar School of Yoga.

(MSY-CT-104)

Course Details-4

Subject Name- Biomechanics and Kinesiology

Subject Code-(MSY-CT-104)

CREDIT: 4	CA: 30	SEE: 70	MM: 100
-----------	--------	---------	---------

## Course Objectives:

Following the completion of this course, students shall be able to-

- To describe importance of biomechanics in yoga practice.

- To interpret concepts and principles that influence human movement.
- To illustrate the use of these general biomechanics concept in the professional skill for the diagnosis of the movement during yoga practices.

## Course Outcomes (COs):

After going through this course, learners are expected to-

- Outline biomechanics of major synovial joint-hip, spine, shoulder, elbow, wrist and associated muscles.
- Explain concept of load, motion, linear and angular kinematics and kinetics for analysis of human motion.
- Practice idea of biomechanics and kinesiology for proper postural alignment, jumping, walking, running and gait analysis.

	<b>BLOCK-1 An Overview of Kinesiology and the Biomechanics Principles in Yoga</b>
<b>UNIT 1</b>	Introduction, Definitions Kinesiology and the Biomechanics, meanings of key biomechanical terminology and kinesiology such as energy, power, work, friction, and gravity. In yoga, the importance of these concepts is highlighted for improving alignment, movement efficiency, and preventing injuries.
<b>UNIT 2</b>	Biomechanics of Hip and Spine-Understanding the anatomical structure, functional dynamics, and mechanical principles governing both the hip joint and the spinal column, with emphasis on movement analysis, posture, gait, load distribution, spinal alignment, and musculoskeletal health.
	<b>BLOCK-2 Core Concept</b>
<b>UNIT 1</b>	Postural reflexes and stretches while performing yoga poses; Force: definition, types, meaning, and use in different yoga poses, The definition, significance, and application of Newton's Laws of Motion to yoga exercises.
<b>UNIT 2</b>	The "shoulder", elbow, wrist, and "hand" biomechanics encompass the "structure and function", "muscle activity", and "force analysis", during yoga poses. In order to improve movement efficiency and prevent injuries during yoga practice.



	BLOCK- 3 Kinesiology
UNIT 1	Musculoskeletal System Loads and Motion: running, walking, jumping, gait analysis, human movement in a fluid medium, linear and angular kinematics and kinetics, kinematics and kinetic Principles for Human Motion analysis, biomechanics, body segment characteristics and segment inertia qualities are measurement and analysis.
UNIT 2	Muscle Biomechanics: The fundamentals of sports biomechanics are movement patterns. Asanas motions, joint forces, and muscle moment qualitative analysis muscle strength and energy expenditure during an asana movement, the effects of different asanas on health.

### Reference books:

1. **Cael, C.** (2010). *Functional Anatomy: Musculoskeletal Anatomy, Kinesiology, and Palpation for Manual Therapists* (J. Goucher, Ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
2. **Clay, J. H., & Pounds, D. M.** (2008). *Basic Clinical Massage Therapy: Integrating Anatomy and Treatment* (2nd ed.). Lippincott Williams & Wilkins. doi:10.1139/apnm-2014-0147
3. **Franc Bell.** (1998). *Principles of Mechanics and Biomechanics*. Stanley Thornes Publications.
4. **Griffiths, I. W.** (2006). *Principles of Biomechanics & Motion Analysis*. Lippincott Williams & Wilkins.
5. **Jelvéus, A., & Oddsson, K.** (2011). *Integrated Sports Massage Therapy: A Comprehensive Handbook*. London, UK: Elsevier Churchill Livingstone. doi:10.1016/B978-0-443-10126-7.00001-0
6. **Kaminoff, L., Matthews, A., & Ellis, S.** (2007). *Yoga Anatomy*. USA: Human Kinetics.
7. **McGinnis, P.** (2013). *Biomechanics of Sport and Exercise*. Champaign, IL: Human Kinetics.
8. **Borg-Olivier, S., & Machliss, B.** (2011). *Applied Anatomy & Physiology of Yoga*. Waverley, NSW: YogaSynergy.
9. **Werner, R.** (2013). *A Massage Therapist's Guide to Pathology* (5th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

**Course Details-5**  
**Subject Name- Yoga, Dietetics & Nutrition**  
**Subject Code- (MSY-EL-105)**

<b>CREDIT: 4</b>	<b>CA: 30</b>	<b>SEE: 70</b>	<b>MM: 100</b>
------------------	---------------	----------------	----------------

### Course Objectives:

Following the completion of this course, students shall be able to

- Understand the concept of diet and the medical value of nutrition
- Advise appropriate diet to different age groups
- Benefits and caloric value of various food group

### Course Objectives:

Teaching learning activities related to this course will enable learner to

- Explain food ingredients and their nutritional and remedial values.
- Identify vegetarian and non-vegetarian sources of food ingredients of balanced diet.
- Prescribe quality, quantity, frequency, timing and duration of diet and dietary habit that suits yogic lifestyle.

	<b>Block-1 Basic concepts and components of food and nutrition</b>
<b>UNIT 1</b>	Definition of Nutrition, Basic Terminology, Human Nutritional Requirements
<b>UNIT 2</b>	Concept of Food and Its Functions- What is Food, Acceptance of Food, Functions of Food
<b>UNIT 3</b>	Nutrients and Their Sources, Functions, and Effects on the Body- Micronutrients, Minerals, Water
<b>UNIT 4</b>	Components of Food and Their Classification-Macro Nutrients, Micro Nutrients, Water
	<b>Block-2 Food groups</b>
<b>UNIT 1</b>	Pulses, Nuts, and Oilseeds



<b>UNIT 2</b>	Cereals & Millets
<b>UNIT 3</b>	Vegetables and Fruits
<b>UNIT 4</b>	Fats, Oils, Sugar, and Jaggery
<b>UNIT 5</b>	Milk and Milk Products
<b>Block-3 Yogic Concept of Diet &amp; Nutrition</b>	
<b>UNIT 1</b>	Diet According to Prakriti (Body Constitution) - Vata, Pitta, and Kapha
<b>UNIT 2</b>	Pathya and Apathya in Yogic Diet
<b>UNIT 3</b>	Classification of Yogic Diet According to Traditional Texts
<b>UNIT 4</b>	Concept of Ahara (Diet) and Mitahara (Moderation)
<b>Block-4 Food and Metabolism</b>	
<b>UNIT 1</b>	Definition and types of energy, Components of energy requirement: BMR, SDA, physical activity, Concept of energy imbalance, Metabolism: anabolism and catabolism
<b>UNIT 2</b>	Metabolism of carbohydrates, lipids, and proteins, Factors affecting energy requirement and expenditure, Factors influencing BMR, thermal effect of food, and physical activity energy use
<b>UNIT 3</b>	Direct and indirect calorimetry, Double labelled water technique, Heart rate monitoring method

### Reference books:

1. Stanley Davidson & others: Human Nutrition & Dietetics, The English Language Book Society & Churchill Livings, Revised Edition
2. Dennis Thompson: The Ayurvedic Diet, New age books, New Delhi, 2001.

#### Course Details-5

**Subject Name- Wellness promoting formulation of PYP**

**Subject Code- (MSY-EL-106)**

<b>CREDIT: 4</b>	<b>CA: 30</b>	<b>SEE: 70</b>	<b>MM: 100</b>
------------------	---------------	----------------	----------------

**Course Details-6**  
**Subject Name- Practicum-I (Yoga)**  
**Subject Code- MSY-CP-107**

<b>CREDIT: 4</b>	<b>CA: 30</b>	<b>SEE: 70</b>	<b>MM: 100</b>
------------------	---------------	----------------	----------------

## Course Objectives:

Following the completion of the course, students shall be able to:

- List benefits, contraindications and procedure of all practices.
- Demonstrate each practice with confidence and skill.
- Explain the procedure and subtle points involved.
- Prescribe and teach the yoga practices to any given group.

## Course Outcomes:

After study of this course, a learner will enable to

- Practice yogic cleansing technique, surya namaskar, standing, sitting, prone, supine, balancing, relaxing poses and astakumbhaka
- Interpret scientific basis of yoga poses and breath regulations for their proper preventive, promotive and therapeutic applications.
- Recognize indications and contra-indication of yoga poses and astakumbhaka (breath regulations)

### UNIT 1: Shatkarmas

Dhauti (Kunjal), Vastra dhauti, Danda dhauti, Laghoo and Poorna sankhaprakshalana Neti (Sutra and Jala), Kapalbhathi, Agnisara, Nauli

### UNIT 2 Suryanamaskar

Yogic Jogging, 12 Health Promoting postures as recommended by Swami Ramdev Ji Maharaj, Suryanamaskar practice classically and in varied forms for prevention and therapy.

### UNIT 3: Asanas (Yogic Postures)

Standing Postures



Ardhakati chakrasana, Hastapadasana, Ardhashakrasana, Trikonasana, kati chakrasana, Parivritta trikonasana, Parsvakonasana, Veersana,

### **Sitting Postures**

Paschimottanasana, suptavajrasana, ardhmatsyendrasana, vakrasana, marichasana, malasana,

manduk asana, vakrasana, badhakanasana, merudandasana, akarna dhanurasana, gumukhasana, Chakki asana.

### **Prone Postures**

Bhujangasana, sarpasana, nauka asana, Salabhasana, Dhanurasana, Urdhvamukhosvanasana, Makarasana,

### **Supine Postures**

Halasana, Chakrasana, Sarvangasana, Matsyasana, Shavasana, Setubandhasana, pad vritta asana, cycling.

### **Balancing Postures**

Vrikshasana, vakasana, Garudasana, Namaskarasana, Tittibhasana, Natrajasana

### **UNIT 4: Pranayama**

Breathe awareness, Diaphragmatic breathing, Abdominal breathing, Bhastrika, Kapalbhati, Anulom-vilom, Nadisodhan, Bahya, Ujjayi, Bhramari, Udgeeth, Ujjai, Sitali, Sitkari, Suryabhedhi.

### **Text books:**

1. Balkrishna, A. (2007). Yoga in synergy with medical science. Haridwar, India: Divya
2. Prakashan BooksTM
3. Balkrishna, A. (2017). Yoga Vigyanam. Haridwar, India: Divya Prakashan.

4. Patanjali Research Foundation. (2015). Research Publications. Haridwar, India: Divya
5. Prakashan
6. Ramdev, S. (2006). Yoga Sadhana and Yoga Chikitsa Rahasya. Haridwar, India: Divya
7. Prakashan.
8. Ramdev, S. (2009). Pranayam Rahasya. Haridwar, India: Divya Prakashan.
9. Yoga for Promotion of Positive Health, by Dr R Nagarathna, Dr H R Nagendra  
Published by SVYP, 2002

### Reference books:

10. B.K.S Iyenger: Light on Pranayama, Aquarian/Thorsons, 1992 Bharati, Mungher,
11. Bihar, India.
12. Swami Satyananda Saraswati: Asana, Pranayama, Mudra, Bandha, Bihar Yoga

#### Course Details-7

**Subject Name- Practical Biomechanics and Kinesiology**  
**Subject Code- MSY-CP-108**

<b>CREDIT: 2</b>	<b>CA: 15</b>	<b>SEE: 35</b>	<b>MM: 50</b>
------------------	---------------	----------------	---------------

### Course Objectives:

Following the completion of the course, students shall be able to:

- Describe the principle of biomechanics and its importance during the practice of Yoga.
- Guide the practitioners based on the alignment principles.
- Demonstrate yogic practice having biomechanics principles in mind.

### Course Outcomes:

After the study of this course, a learner will enable to





- Apply principle and skills of biomechanics and kinesiology to explain anatomical effects
- of somatic and energetic yoga practices.
- Optimize somatic manipulation, alignment and range of motion in postural and breath regulatory practices.
- Locate center of gravity rigid bodies and assess angular kinematics

**UNIT 1:** Locating muscles with the help of model/chart and calculation of displacement, speed and velocity, acceleration.

**UNIT 2:** Locating center of gravity of rigid bodies and assessment of angular kinematics of one Plane movements.

**UNIT 3:** Conversion of angular kinematics and Draw stick figures from the photograph of yoga Movements.

**UNIT 4:** Demonstration of yogic practices under the supervision of the teaching faculty.

### **Text book:**

1. Bruce Bowaditch: The Yoga Technique Guide - Principles of Alignment and Sequencing, Third Eye Press, 2015

### **Reference books:**

2. J E Herzenberg. Principles of deformity correction, Springer publication