

**Course Pattern and Scheme of Examination**  
**Yogic Science (Optional) Subject for Graduation**

T – Theory,            P-Practical,            IA – Internal Assessment

a) I/II/III/IV Semester

Courses	Instruction hrs / week	Duration of Exam (hrs)	Marks			Credits
			IA	Exam	Total	
1T	4	3	20	80	100	2
1P	3	3	10	40	50	1
Group II Elective Courses	2	2	10	40	50	1*

\* Credits for elective Courses will be considered for the entire graduation programme.

b) V/VI Semester

Courses	Instruction hrs / week	Duration of Exam (hrs)	Marks			Credits
			IA	Exam	Total	
2 T	2 x 4	2 x 3	2 x 20	2 x 80	2 x 100	2 x 2
2 P	2 x 3	2 x 3	2 x 10	2 x 40	2 x 50	2 x 1

**MANGALORE UNIVERSITY**  
**CHOICE BASED CREDIT SYSTEM**

**COURSE PATTERN AND SCHEME OF EXAMINATION**

**YOGIC SCIENCE**

**I SEMESTER**

Group	Course Code	Title of Courses	Instruction hrs/week	Duration of Exam (hrs)	Max. Marks			Credits
					IA*	Exam	Total	
Group I Core Courses	BSCYSC 131	Introduction to Yogic Science - I	4	3	20	80	100	2
	BSCYSP 132	Practicals I	3	3	10	40	50	1
Group II Elective Courses	BSCYSCE 133	Basics relevant to Yogic Science	2	2	10	40	50	1

**II SEMESTER**

Group I Core Courses	BSCYSC 181	Hatha Yoga	4	3	20	80	100	2
	BSCYSP 182	Practicals II	3	3	10	40	50	1
Group II Elective Courses	BSCYSCE 183	Ghata Yoga	2	2	10	40	50	1

**III SEMESTER**

Group I Core Courses	BSCYSC 231	Basic Anatomy and Physiology: Modern Concepts	4	3	20	80	100	2
	BSCYSP 232	Practicals III	3	3	10	40	50	1
Group II Elective Courses	BSCYSCE 233	Blood	2	2	10	40	50	1

**IV SEMESTER**

Group I Core Courses	BSCYSC 281	Fundamentals of Yogic Science - I	4	3	20	80	100	2
	BSCYSP 282	Practicals IV	3	3	10	40	50	1
Group II Elective Courses	BSCYSOE 283	Introduction to Yogic Science- II	2	2	10	40	50	1

**V SEMESTER**

Group	Course Code	Title of Courses	Instruction hrs/week	Duration of Exam (hrs)	Max. Marks			Credits
					IA*	Exam	Total	
Group I Core Courses	BSCYSC 331	Fundamentals of Yogic Science-II	4	3	20	80	100	2
	BSCYSC 332	Neurophysiology and Nutrition	4	3	20	80	100	2
	BSCYSP 333	Practicals V	3	3	10	40	50	1
	BSCYSP 334	Practicals VI	3	3	10	40	50	1

**VI SEMESTER**

Group	Course Code	Title of Courses	Instruction hrs/week	Duration of Exam (hrs)	Max. Marks			Credits
					IA*	Exam	Total	
Group I Core Courses	BSCYSC 381	Upanishad & Consciousness (Isha, Kena and Kathopanishad)	4	3	20	80	100	2
	BSCYSC 382	Application of Yogic Science	4	3	20	80	100	2
	BSCYSP 383	Practicals VII	3	3	10	40	50	1
	BSCYSP 384	Practicals VIII	3	3	10	40	50	1

\* Based on internal test or tests

# SYLLABUS FOR OPTIONAL SUBJECT - YOGIC SCIENCE

## I SEMESTER

**BSCYSC 131: Introduction to Yogic Science-I** 48 hrs (Each Unit 12 hrs) - 4 hrs/week

- Unit I Yoga: meaning, objective and definitions, Importance of Yoga in personal and social life, Concepts and mis-concepts of Yoga, Origin of Yoga and its development.
- Unit II Schools of Yoga - Hatha Yoga, Raja Yoga, Bhakti Yoga, Jnana Yoga, KarmaYoga.
- Unit III Five kleshas, tapa traya, antarayas, Concept of citta, stages of citta (vrtti), Methods of controlling chitta vrittis, Samadhi and its kinds.
- Unit IV Yogic anatomy – Nadis, Susumna nadi, Pancha Koshas, Pancha Pranas, Six Chakras, Sahasrara chakra

### References:

1. Vivekananda Swami (2009), Rajayoga, Published from, Advaita Ashram, Kolkata.
2. Prasada Rama (1988), Patanjali's Yoga Sutras Translation, Published from Munshiram Ashram, New Delhi.
3. Taimini I. K. (1999), The Science of Yoga Theosophical, Publishing House, Adyar, Madras.
4. Adidevananda Swami (1970), Patanjala Yogadarsana Vyasabhasyasahita, Published from, Advaita Ashram, Kolkata.
5. Virupakshananda Swami (1995), Sankhyakarika of Iswara Krishna, Published by Sri Ramakrishna Math, Mylapore, Madras -600 004
6. Dasgupta S. N. (1924), Yoga as a Philosophy and Religion, Published from Delhi.
7. Krishnananda Swami (1973), A short history of religions and philosophic thought in India, Published from The divine life society, Shivanandanagar, Rishikesh.
8. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore.

1. Jalaneti
2. Kapalabhati
3. Swastikasana
4. Vajrasana
5. Suptavajrasana
6. Urdva Vajrasana
7. Tada – 1
8. Surya Namaskara - 12 vinyasa
9. Trikonasana
10. Parsvakonasana
11. Pavanamuktasana
12. Bhujangasana
13. Ujjayi pranayama
14. Anuloma-Viloma pranayama
15. Savasana - 0

**References:**

1. Iyengar B.K.S. (2003), Light on Yoga, Published by Harper Collins Publishers, India
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore
4. Jois Pattabhi (1962), Yoga mala – Part I, Published by Asthangayoga Nilaya, Mysore.

## II SEMESTER

### BSCYSC 181: Hatha Yoga

48 hrs (Each Unit 12 hrs) - 4 hrs/week

- Unit I Hatha Yoga: Its meaning, objects and development, Personality of Hatha Yogi, helping and obstructive elements in Sadhana; characteristic features of a Yogi and his personality. Asana: Its meaning and purpose, different types of Asanas – Methodology and benefits of Asanas.
- Unit II Shat-Karma according to Hatha Yoga Pradeepika and Gheranda Samhita.
- Unit III Definition and different types of Pranayamas according to Hatha Yoga Pradeepika
- Unit IV Definition and types of mudras according to Hatha Yoga Pradeepika

#### References:

1. Digambaraji Swami (1970), Hathayoga Pradipika of Swatmarama, Published by Kaivalyadhama, Lonavala (Dist. Pune), Maharashtra.
2. Digambaraji Swami (1978), Gheranda Samhita, Published by Kaivalyadhama, Lonavala (Dist. Pune), Maharashtra.
3. Hathayoga Pradipika of Swatmarama (1994), Published by The Adyar library and research centre, Chennai

## **BSCYSP 182: Practicals II**

**36 hrs (3 hrs/week)**

1. Sutraneti
2. Swastikasana
3. Siddhasana
4. Tadasana-2
5. Padangusthasana
6. Parsvothanasana
7. Virabhadrasana
8. Pascimattonasana
9. Purvothanasana
10. Vakrasana
11. Salabhasana
12. Marिकासana-I
13. Ujjayi pranayama
14. Anuloma-Viloma pranayama
15. Savasana-1

### **References:**

1. Iyengar B. K. S. (2003), Light on Yoga, Published by Harper Collins Publishers, India.
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore
4. Jois Pattabhi (1962), Yoga mala – Part I, Published by Asthangayoga Nilaya, Mysore.

### III SEMESTER

#### **BSCYSC 231: Basic Anatomy and Physiology: Modern Concepts**

48 hrs (Each Unit 12 hrs) - 4 hrs/week

Unit I	Cell, Tissues, Basic anatomy and physiology of Skeleton system and muscles; Basic anatomy and physiology of cardio vascular system
Unit II	Basic anatomy and physiology of digestive system and excretory system
Unit III	Basic anatomy and physiology of Respiratory system, an introduction to Special senses
Unit IV	Basic anatomy and physiology of Endocrine system

#### **References:**

1. Chatterjee C. C. (1992), Human Physiology (Vol. I & II), Published by Medical Allied Agency, Calcutta, 1992.
2. Evelyn C. Pearce (1982), Anatomy and Physiology for Nurses, Published by Faber and Faber Ltd., London, 1968.
3. Tortora J. D. *et al.* (2009), Principles of Anatomy and Physiology, Published by John Wiley and Sons, New Jersey.
4. Gore M. M. (2005), Anatomy and physiology of yogic practices, published by New Age Books, New Delhi.



### **BSCYSP 232: Practicals III**

36 hrs (3 hrs/week)

1. Swastikasana
2. Trataka Kriya
3. Vaidika Suryanamaskara -9 Vinyasa
4. Padmasana
5. Bhekasana
6. Dhanurasana
7. Ustrasana
8. Marिकासana -I
9. Janusirsasana
10. Navasana
11. Utthanapadasana
12. Padottanasana
13. Ujjayi Pranayama
14. Anuloma-Viloma pranayama
15. Savasana -2

#### **References:**

1. Iyengar B.K.S (2003), Light on Yoga, Published by Harper Collins Publishers, India
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore
4. Jois Pattabhi (1962), Yoga mala – Part I, Published by Asthangayoga Nilaya, Mysore.

## IV SEMESTER

**BSCYSC 281: Fundamentals of Yogic Science – I** 48 hrs (Each Unit 12 hrs) - 4 hrs/week

- Unit I Nature of Yoga Science, Definition of Yoga, the nature of seer in pure and modified state, Vrttis – Nature, classification, definition, method to control of citta vrttis; Samprajnata Samadhi and its classification, Asamprajnata and its classification. Variation in the attainment of Asamprajnata Samadhi; Ishwarapranidhana – a means to attain Samadhi, Definition & quality of Ishwara.
- Unit II Chittavikshepa, Chittaprasadana and its associates, control of Chittavikshepa, different methods of manasthiti and its benefits, Samapatti, Sukshnavishayatwa, Sabijasamadhi, Speciality of Nirvichara, Rthambaraprajna, Nirbijasamadhi
- Unit III Kriya-yoga and its benefits; classification, methods to control kleshas, karmasaya. Vipaka of kleshamula, Heyaswarupa, Heyahetu, Drsya and Drasta.
- Unit IV Samyoga-Nature & cause, Hanopaya, Hanaswarupa. Vivekakhyathi, Astanga yoga

### References:

1. Vivekananda Swami (2009), Rajayoga, Published from, Advaita Ashram, Kolkata.
2. Prasada Rama (1988), Patanjali's Yoga Sutras Translation, Published from Munshiram Ashram, New Delhi.
3. Taimini. I. K. (1999), The Science of Yoga Theosophical, Publishing House, Adyar, Madras.
4. Adidevananda Swami (1970), Patanjala Yogadarsana Vyasabhasyasahita, Published from, Advaita Ashram, Kolkata.

**BSCYSP 282: Practicals IV:**

36 hrs (3 hrs/week)

1. Swastikasana
2. Yaugika Suryanamaskara -17 vinyasa
3. Padmasana
4. Baddha padmasana
5. Ardha baddha padma pascimottanasa
6. Maricasana -2
7. Maricasana -3
8. Jathara Parivarta
9. Upavistakonasana
10. Supta padangusthasana
11. Bharadwajasana
12. Ardhamatsyendrasana
13. Ujjayi Pranayama
14. Anuloma-Viloma pranayama
15. Savasana -2

**References:**

1. Iyengar B. K. S. (2003), Light on Yoga, Published by Harper Collins Publishers, India.
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore.
4. Jois Pattabhi (1962), Yoga mala – Part I, Published by Asthangayoga Nilaya, Mysore.

## V SEMESTER

### BSCYSC 331: Course I - Fundamentals of Yogic Science-II

48 hrs (Each Unit 12 hrs) - 4 hrs/week

- Unit I Dharana, Dhyana, Samadhi, Samyama, Antaranga and Bahiranga yoga, Application and benefits of Parinama, Dharma and Dharmi, Parinamanyatva, Samyama on – Parinamatraya, knowledge of bhuta ruta, Parachitta jnana, Antardhana, Aparantajnana, Samyama on – Maitri, Surya, Chandra, Nabhichakra, Kanthakupa, Kaurmanadi, Murdhajyothi, Pratibha, Hrdaya, Swartha, Udana, Samana, and their benefits; Attainments of divyashrotra, Akashagamana, Bhutajaya, Animadi siddhi, Indriya jaya, Kaya jaya, Sarvajnatva, Kaivalya, Vivekajnana, knowledge of satva and purusha and its benefits – According to Patanjala Yoga sutra - Chapter – III.
- Unit II Kaivalya – Introduction, Siddhi, Jatyantaraparinama, Nirmanachitta. Karma, Vasana, Smrti and Samskara, Support of vasana, Guna and its existence, Vastu, Jnata and Ajnata of Vastu. Quality of purusha, Non-self illumination of Buddhi and its function. Chitta, Dharmamegha Samadhi, Infinite knowledge. Mutation of Guna, Krama, Pratiprasava and Kaivalya – According to Patanjala Yogasutra – Chapter IV.
- Unit III Introduction to Bhagavadgita, Concept of Sankhya Yoga and Karma Yoga according Bhagavadgita Chapter 2
- Unit IV Concept of Triguna according Bhagavadgita Chapter 14 - Qualities of satva, Rajas, Tamas

#### References:

1. Vivekananda Swami (2009), Rajayoga, Published from, Advaita Ashram, Kolkata.
2. Prasada Rama (1988), Patanjali's Yoga Sutras Translation, Published from Munshiram Ashram, New Delhi.
3. Taimini.I.K (1999), The Science of Yoga Theosophical, Publishing House, Adyar, Madras.
4. Adidevananda Swami (1970), Patanjala Yogadarsana Vyasabhasyasahita, Published from, Advaita Ashram, Kolkata.
5. Dr. S. Radhakrishnan (1948), Bhagavadgeetha, Harper Collins, New Delhi-201307

## **BSCYSC 332: Course II - Neurophysiology and Nutrition**

48 hrs (Each Unit 12 hrs) - 4 hrs/week

- Unit I Introduction of nervous system, Central nervous system, Cranial Nerves and spinal nerves, sympathetic and parasympathetic nervous system; Neurons- structure& function, synapses, Function of ganglion axon and dendrites.
- Unit II Structure of Brain, parts of brain, general introduction of left and right brain hemisphere, spinal cord; Electro Encephalogram, Nature of brain waves and general introduction of Alfa waves, Beta waves, Theta waves and Delta waves.
- Unit III Nutrition – Macro nutrients in diet – Carbohydrate, Protein, Fat
- Unit IV Nutrition –Micro nutrients in diet - Vitamins, Minerals

### **References:**

1. Chatterjee C. C. (1992), Human Physiology (Vol. I & II), Published by Medical Allied Agency, Calcutta, 1992.
2. Evelyn C. Pearce (1982), Anatomy and Physiology for Nurses, Published by Faber and Faber Ltd., London, 1968.
3. Tortora J. D. *et al.* (2009), Principles of Anatomy and Physiology, Published by John Wiley and Sons, New Jersey.
4. Gore M.M (2005), Anatomy and physiology of yogic practices, Published by New Age Books, New Delhi.
5. Prof. A. K. Jain (2002), Human Physiology and Biochemistry, Arya Publications, industrial area, Trilokpur Road, Kala Amb-173030, Sirmour, HP.
6. Ross and Wilson (2006), Anatomy and Physiology in Health and Illness, 10<sup>th</sup> edition, Elsevier Publication. New York.

## **BSCYSP 333: Practicals - V**

36 hrs (3 hrs/week)

1. Triyak Tadasana
2. Katiparivarta
3. Ardhashandrasana
4. Padahasthasana
5. Utthita padangusthasana
6. Prasarita padottanasana
7. Maricasana – 4
8. Baddhakonasana
9. Supta padangusthasana – Parsvasahita
10. Simhasana
11. A Karnadhanurasana
12. Ujjayi Pranayama
13. Anuloma-Viloma pranayama
14. Pranava Meditation
15. Savasana-2

### **References:**

1. Iyengar B. K. S. (2003), Light on Yoga, Published by Harper Collins Publishers, India.
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore.
4. Jois Pattabhi (1962), Yoga mala – Part I, Published by Asthangayoga Nilaya, Mysore.

**BSCYSP 334: Practicals - VI**

36 hrs (3 hrs/week)

1. Vahnisara
2. Prasaritapadottanasana – 1
3. Prasaritapadottanasana – 2
4. Prasaritapadottanasana – 3
5. Prasaritapadottanasana – 4
6. Pascimottanasana – 1
7. Pascimottanasana – 2
8. Purvottanasana
9. Tryanmukhaikapada pascimottanasana
10. Kurmasana
11. Viparitakarani
12. Halasana
13. Ujjayi Pranayama
14. Anuloma-Viloma pranayama
15. Pranava Meditation

**References:**

1. Iyengar B. K. S. (2003), Light on Yoga, Published by Harper Collins Publishers, India.
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore.
4. Jois Pattabhi (1962), Yoga mala – Part I, Published by Asthangayoga Nilaya, Mysore.

## VI SEMESTER

### BSCYSC 381: Course I- Upanishad & Consciousness (Isha, Kena and Kathopanishad)

48 hrs (Each Unit 12 hrs) - 4 hrs/week

- Unit I Definition of Upanishad, Introduction of Aupanishadic literature, importance of Upanishad, Aupanishadic theory of Advaita, davita and Trait.
- Unit II Karma, types of Karma, Karmaliptata, Karmatyaga – Karmavipaka, Purushartha chatushtya, Vidya – Avidya and Shambhuti – Vinasha; Indriya (sense organs), Five Jnanedriya and five Karmendriya, Concept of manas, Relation between senses and Consciousness, Vishayas – Shabda, Sparsha, Roopa, Rasa and Gandha.
- Unit III Nachiketopakhyana, Definition of Mrityu (death), Death and Consciousness, Death and human body, temptating power of Vishayas, Immortality of the soul, Shreyas – Preyas and Swarga – Naraka.
- Unit IV Nature of Consciousness, What is knowledge of soul, means of knowledge of soul, knowledge and logic, liberation: as the result of Jnana, definition of libration, Rta and Satya.

#### References:

1. Rashakrishnan S., The Principal Upanishads, Motilal Banarsidas, New Delhi.
2. Ranganathananda Swami, Message of Upanishads, Published by Bharatiya Vidhya Bhavan, Bombay.
3. Pathak N Bhawesh, Dashopanishad, Chowkamba Varanasi.
4. Rashakrishnan S., Dashopanishads with English translations, Motilal Banarsidas, New Delhi



## **BSCYSC 382: Course II- Application of Yogic Science**

**48 hrs (Each Unit 12 hrs) - 4 hrs/week**

- Unit I     Role of Yoga in Physical and mental diseases with emphasis on modern crisis of health, Potentiality of yoga in Prevention and cure of Physical and mental diseases; Yogic food system: Concept of ‘Anna’, Pathya-apathya, mithahara, Rules in food consumption, Food and health.
- Unit II     Application of kriyas: To remove impurities from different systems and to promote their function
- Unit III    Application of Asanas: In prevention & cure of diseases and promotion of health with respect to different systems.
- Unit IV    Application of Pranayamas and Meditation Techniques: In prevention & cure of diseases and promotion of health with respect to different systems.

### **References:**

1. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
2. Kuvaalayananda Swami and Vinekar, Yogic Therapy, Kaivalyadhama, Lonavala, Pune, Maharashtra.
3. Gore M.M. (2005), Anatomy and physiology of yogic practices, Published by New Age Books, New Delhi.
4. Swami Shankaradevananda Sarasvati, Yogic Management of common diseases, Bihar School of Yoga, Munger.
5. Iree ne Carmine (2008), Hidden secrets of Yogic diet for weight loss, published by Jaico, Ahmedabad.

## **BSCYSP 383: Practicals - VII**

36 hrs (3 hrs/week)

1. Swastika
2. Ardha baddha padmothanasana
3. Parivrtta Trikonasana
4. Vatayanasana
5. Ubhaya padangusthasana
6. Urdhawamukha pascimottanasana
7. Kapotasana
8. Pascimottanasana -III
9. Yogamudra
10. Ekapadasirsasana
11. Ujjayi Pranayama
12. Anuloma-Viloma pranayama
13. Soham Meditation
14. Savasana I
15. Savasana II

### **References:**

1. Iyengar B. K. S. (2003), Light on Yoga, Published by Harper Collins Publishers, India.
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore.
4. Jois Pattabhi (1962), Yoga mala – Part I, Published by Asthangayoga Nilaya, Mysore.

## **BSCYSP 384: Practicals - VIII**

36 hrs (3 hrs/week)

1. Swastika
2. Dvipadasirsasana
3. Yoganidrasana
4. Setubandhasana
5. Sarvangasana
6. Suptakonasana
7. Urdhwa padmasana
8. Pindasana
9. Matsyasana
10. Sirsasana
11. Ujjayi Pranayama
12. Anuloma-viloma pranayama
13. Soham Meditation
14. Savasana I
15. Savasana II

### **References:**

1. Iyengar B. K. S. (2003), Light on Yoga, Published by Harper Collins Publishers, India.
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore.
4. Jois Pattabhi (1962), Yoga mala – Part I, Published by Asthangayoga Nilaya, Mysore.

## **BSCYSCE133: Elective Course I: Basics relevant to Yogic Science**

24 hrs (Each Unit 12 hrs) - 2 hrs/week

- Unit I Introduction to Bhagavadgita; Karma Yoga and Dhyana Yoga according Bhagavadgita
- Unit II Triguna concept of food according Bhagavadgita; Concept of Jnana Yoga and Bhakti Yoga according Bhagavadgita.

### **References:**

1. Dr. S. Radhakrishnan (1948), Bhagavadgeetha, Harper Collins, New Delhi-201307
2. Vivekananda Swami (2009), Rajayoga, Published from, Advaita Ashram, Kolkata.
3. Prasada Rama (1988), Patanjali's Yoga Sutras Translation, Published from Munshiram Ashram, New Delhi.
4. Taimini I. K. (1999), The Science of Yoga Theosophical, Publishing House, Adyar, Madras.
5. Adidevananda Swami (1970), Patanjala Yogadarsana Vyasabhasyasahita, Published from, Advaita Ashram, Kolkata.

**BSCYSCE 183: Elective Course II: Ghata Yoga**      24 hrs (Each Unit 12 hrs) - 2 hrs/week

Unit I      Ghata yoga – Introduction, Kriyas- 21 varieties of practices & benefits;

Asana – practicing methods and benefits

Unit II      Pranayama, preparation, types of practice, benefits.

**References:**

1. Digambaraji Swami (1970), Hathayoga Pradipika of Swatmarama, Published by Kaivalyadhama, Lonavala (Dist.Pune), Maharashtra.
2. Digambarji Swami (1978), Gheranda Samhita, Published by Kaivalyadhama, Lonavala (Dist.Pune), Maharashtra.
3. Hathayoga Pradipika of Swatmarama (1994), Published by The Adyar library and research centre, Chennai
4. Swami Niranjanananda, Gheranda Samhita, Bihar School of Yoga.
5. Swami Digambarji, Gheranda Samhita, Kaivalyadhama, Lonavala.

**BSCYSCE 233: Elective Course III: Blood**

24 hrs (Each Unit 12 hrs) - 2 hrs/week

- Unit I            Composition of blood, RBC, WBC, Platelets and plasma; Hemoglobin, Coagulation and Anticoagulants
- Unit II            Blood groups and importance; Blood volume, Blood Pressure and diseases.

**References:**

1. Chatterjee C. C. (1992), Human Physiology (Vol. I & II), Published by Medical Allied Agency, Calcutta, 1992.
2. Evelyn C. Pearce (1982), Anatomy and Physiology for Nurses, published by Faber and Faber Ltd., London, 1968.
3. Tortora J. D. *et al.* (2009), Principles of Anatomy and Physiology, published by John Wiley and Sons, New Jersey.
4. Gore M. M. (2005), Anatomy and physiology of yogic practices, published by New Age Books, New Delhi.
5. Prof. A. K. Jain (2002), Human Physiology and Biochemistry, Arya Publications, industrial area, Trilokpur Road, Kala Amb-173030, Sirmour, HP.
6. Ross and Wilson (2006), Anatomy and Physiology in Health and Illness, 10<sup>th</sup> edition, Elsevier Publication. New York.

## **BSCYSOE 283: Open Elective Course: Introduction to Yogic Science- II**

24 hrs (Each Unit 12 hrs) - 2 hrs/week

- Unit I            Yoga: meaning, objective and definitions, Importance of Yoga in personal and social life, Concepts and mis-concepts of Yoga, Origin of Yoga and its historical development, Yoga for personal health.
- Unit II            Schools of Yoga - Hatha Yoga, Raja Yoga, Bhakti Yoga, Jnana Yoga, KarmaYoga, Kundalini Yoga

### **References:**

1. Vivekananda Swami (2009), Rajayoga, Published from, Advaita Ashram, Kolkata.
2. Prasada Rama (1988), Patanjali's Yoga Sutras Translation, Published from Munshiram Ashram, New Delhi.
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