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**STATE EDUCATIONAL POLICY (SEP) - 2024**

Undergraduate Programme –  
**BACHELOR OF SCIENCE – B.Sc. (YOGIC SCIENCE)**

**JULY 2024**

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**Department of Human Consciousness & Yogic Sciences  
Mangalore University  
Mangalagangothri – 574 199.**

## Undergraduate Programme –

### **BACHELOR OF SCIENCE – B.Sc. (YOGIC SCIENCE)**

#### **Preamble:**

Yoga is one among the greatest gifts from ancient India to the whole world, as a technique to understand oneself through proper living and is now widely accepted as a holistic approach towards healthy life in all aspects. It is holistic since it is a great blend of philosophical as well as practical aspects of life. Yogic Science teaches to lead a tensionless life with respect to body, mind and soul trinity, taking into cognisance the environment around. The foundation stones to have intellect guarded by wisdom and blissful life are moral values. Yogic science occupies a special significance in the present-day life which is associated with full of stress and strain causing a number of psychosomatic diseases.

NEP 2020, being implemented now has emphasised the study of Indian traditional knowledge systems. It says, the rich heritage of ancient and eternal Indian knowledge and thought has been a guiding light for this Policy. The rich legacies to world heritage must not only be nurtured and preserved for posterity but also researched, enhanced, and put to new uses through our education system. Courses and programmes in subjects, such as Indology, Indian languages, AYUSH systems of medicine, yoga, arts, music, history, culture, and modern India, internationally relevant curricula in the sciences, social sciences, and beyond, meaningful opportunities for social engagement, quality residential facilities and on-campus support, etc. will be fostered to attain this goal of global quality standards, attract greater numbers of international students, and achieve the goal of ‘internationalization at home’. Yoga, greatest gift from ancient India, is becoming popular day by day and has become a wave sweeping across the globe. With this background, it is proposed to introduce the Undergraduate Programme - **“Bachelor of Science (Yogic Science)” / B.Sc. (Yogic Science)**. In this Programme, Yoga is introduced as a science of Holistic living and not merely as Yoga postures. During the Programme, the student is taught the concepts of Yoga and application of Yoga for the treatment and prevention of various psychosomatic ailments. The Graduates have opportunities worldwide to work as Lab assistant, Demonstrator, Yoga Trainer in Yoga Therapy Centres, Yoga Schools; Resource person for Yoga Training Camps and Wellness Camps; As Assistant Professor, Research Assistant/Fellow in Academics. Opportunities are available in India as well as in abroad.

- 1. Title of the Programme:** The Course shall be called “**Bachelor of Science (Yogic Science)**” / **B.Sc. (Yogic Science)**.
- 2. Aim of the Programme:** The course will aim to impart the fundamental knowledge and Skills about Yoga, its basis and applications.
- 3. Objectives of the Programme:**
  - a. Promoting the awareness for positive health and personality development in the student through Yoga.
  - b. Instilling and inculcating the general interest and inquisitive knowledge about Yoga for Health, personality development and spiritual evolution.
  - c. To produce manpower to give Yoga training / Teaching, Yoga Therapy and Yoga Research at all levels.
  - d. To produce manpower to give Yoga Training and Therapy at hospitals.
  - e. To prepare the graduates in Yoga Science to study the higher aspects of Yoga Education, Therapy and Research at the post-graduate level.
  - f. To generate manpower to assist in Yoga Research Projects.
  - g. To encourage the pupil to be a global citizen, serving the human beings at large through the noble profession of Yoga.
- 4. Scope of the Programme:**
  - a. The scope of this programme is to make the B.Sc. (Yogic Science) Graduates work as a Yoga Teacher/ Yoga Instructor in Schools, Colleges, Universities and organizations.
  - b. They can work as a Yoga Therapists.
  - c. They can work as Research Assistants/ Fellow in Yoga research projects.
  - d. As Assistant Professor in Academics.
- 5. Duration of the Programme:** The Programme will be of four academic years (eight semesters) duration.
- 6. Eligibility:** The candidate should have passed 12th Standard or equivalent with minimum 45%.
- 7. Curriculum:** The syllabus is designed according to SEP 2024 Regulations and Scheme of the Programmes, to fulfil aforesaid objectives containing theory subjects, practical/laboratory work, Dissertation and field training in Yoga education, Yoga therapy and self-development through assignments etc.
- 8. Medium of Instruction:** English.
- 9. Scheme of Examination and Evaluation:** According to the University guidelines for the similar Programmes.

## **Programme Outcome:**

Graduates with strong academic knowledge, discipline-specific and generic skills complemented with sound physical and mental health and social responsibility are the greatest assets of the country. The curriculum framework under SEP for Yogic Science as an optional subject for graduate students is expected to attribute them with;

- Knowledge about the history and development of Yoga as a subject for study.
- The fundamental knowledge about the basic principles of Yoga.
- Knowledge of different schools of Yoga and their practicing methods.
- Basic knowledge about classical yogic texts.
- Basic knowledge about the human physiology and anatomy and common diseases.
- Ability to understand the psycho-physiological effects of various Yoga practices.
- Understanding of the theoretical background for each and every practice.
- Basic knowledge about good life style and food habits.
- Ability to ward off the misconceptions about Yoga and to propagate its real essence to the needy.
- Ability to carefully observe the life situation either success or failure and to manage those without losing the tranquility of the mind.
- Ability to take up the career in multi-modal way like Yoga trainer, Therapist or as an Academician.
- Enhanced concentration and excellency in the core subject will increase the efficiency of a student and helps in multi-facet improvement in the quality of life.
- Graduates with sound mental and physical health, filled with moral values and contribute to nation as a responsible citizen.

## Job Opportunities in Yogic Science Core Course

### First Year:

Knowledge	Skills Acquired	
<p>Yoga: meaning, objectives and definitions, concepts and mis-concepts, origin and development as a subject.</p> <p>Different schools of yoga and their practicing methods, Fundamentals of Hathayoga, Basics and practicing methods of asanas.</p> <p>Basic principles of Yoga and brief introduction to Kriyas, Asanas, Pranayamas, bandhas and Mudras based on classical Hathayogic texts.</p>	<p>Ability to practice and teach the specified practices of Yoga under the curriculum with basic knowledge about the theoretical background.</p>	<p>Certificate holder can become Yoga Trainer/ Instructor at various firms/institutions like Schools and colleges, Hotels, Resorts, Gyms, Fitness Studios etc. under the expert.</p> <p>Opportunities in India as well as in abroad.</p>

### Second Year:

Knowledge	Skills Acquired	
<p><i>-In addition to the previous-</i></p> <p>Basics of Human Anatomy and Physiology, Various Systems and their functioning.</p> <p>Knowledge of yogic practices in few classical texts.</p>	<p><i>-In addition to the previous-</i></p> <p>Ability to understand the psycho-physiological functioning and their disturbed state.</p> <p>Ability to understand the effect of various practices on human body.</p> <p>Better understanding of the theory behind the practices and their application in everyday life.</p>	<p>They will be able to give practices especially in firms like Hospitals, Yoga Therapy Centers, Health centers, AYUSH Centers etc. as an independent instructor.</p> <p>Opportunities in India as well as in abroad.</p>

### Third Year: Bachelor's Degree

Knowledge	Skills Acquired	Employability
<p><i>-In addition to the previous-</i> Fundamental of Yoga Shastra– Based on Pathanjala Yogasutras</p> <p>Citta and its nature, attainment of concentration. Kriyayoga and its application. Ashtangayoga –practices and benefits, Liberation, Nature of the seer.</p> <p>Special emphasis on modern concept of neurophysiology and nutrition.</p> <p>Basic principles and application of Yoga Therapy. Advanced level of practices.</p>	<p><i>-In addition to the previous-</i> Knowledge of Yoga Shastra and clarity regarding the aim and objectives of its practices and application.</p> <p>Ability to deliver lectures on the subject Yoga.</p> <p>Ability to co-relate the modern psycho-neurological concepts and the ancient Indian perspective of mental health.</p> <p>Knowledge about proper lifestyle and food habits and their application in Yoga Therapy.</p> <p>Ability to design Yoga Module for the individual practice.</p>	<p>Lab assistant, Demonstrator, Yoga Trainer in Yoga Therapy Centers, Yoga Schools.</p> <p>Resource person for Yoga Training Camps and Wellness Camps.</p> <p>Opportunities in India as well as in abroad.</p>

**COURSE PATTERN AND SCHEME OF EXAMINATION**

**Undergraduate Programme –**

**BACHELOR OF SCIENCE – B.Sc. (YOGIC SCIENCE)**

Paper Code	Title of the Course / Paper	Type	Instruction Hour per Week	Total No. of Hours	Duration of Exam (Hrs.)	IA Marks	Exam Marks	Total Marks	Total Credits
<b>Semester - I</b>									
1	Foundations of Yoga	Theory	4	42	3	20	80	100	3
		Practical	4	52	4	10	40	50	2
2	Foundations and Practices of Hath Yoga	Theory	4	42	3	20	80	100	3
		Practical	4	52	4	10	40	50	2
3	Human Anatomy and Physiology I	Theory	5	42	3	20	80	100	5
L 1		Theory	4	52	3	20	80	100	3
L 2		Theory	4	52	3	20	80	100	3
Compu lsory									2
<b>Total Credits</b>									<b>23</b>
<b>Semester - II</b>									
4	Yoga in Principal Upanishads	Theory	4	42	3	20	80	100	3
		Practical	4	52	4	10	40	50	2
5	Yoga in Principal Upanishads	Theory	4	42	3	20	80	100	3
		Practical	4	52	4	10	40	50	2
6	Human Anatomy, Physiology and Biochemistry	Theory	4	52	3	20	80	100	5
L 1		Theory	4	52	3	20	80	100	3
L 2		Theory	4	42	3	20	80	100	3
Compu lsory									2
<b>Total Credits</b>									<b>23</b>
<b>Semester - III</b>									
7	Patanjala Yoga Darshana – I	Theory	4	42	3	20	80	100	3
		Practical	4	52	4	10	40	50	2
8	Human Anatomy & Physiology-II	Theory	4	42	3	20	80	100	3
		Practical	4	52	4	10	40	50	2
9	Study of Ghatayoga; Practices in Goraksha Shathaka	Theory	4	52	3	20	80	100	5
L 1		Theory	4	52	3	20	80	100	3
L 2		Theory	4	52	3	20	80	100	3
	Elective Course -1: Fundamentals of Naturopathy	Theory	2	42	2	10	40	50	2
<b>Total Credits</b>									<b>23</b>

Paper Code	Title of the Course / Paper	Type	Instruction Hour per Week	Total No. of Hours	Duration of Exam (Hrs.)	IA Marks	Exam Marks	Total Marks	Total Credits
<b>Semester - IV</b>									
10	Patanjala Yoga Darshana-II	Theory	4	42	3	20	80	100	3
		Practical	4	52	4	10	40	50	2
11	Applied Biochemistry	Theory	4	42	3	20	80	100	3
		Practical	4	52	4	10	40	50	2
12	Study of Hatharatnavali and Goraksha Samhita	Theory	4	52	3	20	80	100	5
L 1		Theory	4	52	3	20	80	100	3
L 2		Theory	4	52	3	20	80	100	3
	Elective Course -2: Fundamentals of Ayurveda	Theory	2	42	2	10	40	50	2
YSc BSc C -1	Compulsory – 1: Fundamentals of Counselling	Theory	2	42	2	10	40	50	2
<b>Total Credits</b>									<b>25</b>
<b>Semester - V</b>									
13	Yoga system and its Practice in Shiva Samhita	Theory	4	42	3	20	80	100	3
14	Fundamentals of Psychology	Theory	4	42	3	20	80	100	3
	Practical	-	4	52	4	10	40	50	2
15	Yogopanishads and Siddhasiddhanta -paddhati	Theory	4	42	3	20	80	100	3
16	Four Streams of Yoga	Theory	4	42	3	20	80	100	3
	Practical	-	4	52	4	10	40	50	2
17	Concept of Food; Svava Yoga and Yoga Rahasya	Theory	3	42	3	20	80	100	3
18	Yoga and Health	Theory	3	42	3	20	80	100	3
	Practical	-	4	52	4	10	40	50	2
YSc BSc C -2	Compulsory – 2: Introduction to Common Ailments	Theory	3	42	2	10	40	50	2
<b>Total Credits</b>									<b>26</b>
<b>Semester - VI</b>									
19	Impact of Yogic Practices on Human Body	Theory	3	42	2	40	60	100	3
		Practical	4	52	4	25	25	50	2
20	Yogic Management of common Disorders	Theory	3	42	2	40	60	100	3
		Practical	4	52	4	25	25	50	2
	Research Methodology + Project Work								12
<b>Total Credits</b>									<b>22</b>
Exit option with <b>Bachelor of Yogic Science</b> Degree (with the completion of courses equivalent to a minimum of 142 credits)									





## **BSc Yogic Science**

### **I SEMESTER**

**YSc BSc C 1: Foundations of Yoga;**

**3 Credits, 42 Hrs**

#### **Learning Objectives:**

The subject entitled 'Foundation of Yoga' has the following **objectives**

- Students of the UG course will have an understanding about origin, history and development of Yoga.
- They will have an idea about the insights of Indian philosophy and Astika & Nastika darshanas.
- Introduction about Yoga according to various yogic texts.

**Learning Outcome:** After learning this paper the candidate is expected to get;

- Comprehensive knowledge about the origin, history and development of Yoga.
- Knowledge about the evolution of Yoga from ancient times to the modern era.
- Exposure to different schools of Yoga.
- Ability to understand about the deep rootedness of Yoga in Indian knowledge tradition.

#### **UNIT – I: Introduction to Yoga and Bharatiya Darshana**

**[14 Hrs.]**

1. Etymology and definitions of Yoga, Aim, objectives and misconceptions about Yoga, True nature of Yoga and Principles of Yoga.
2. Brief introduction to origin of Yoga, Psychological aspects leading to origin of Yoga, Brief history and development of Yoga (Pre-vedic period to contemporary times), Schools of Yoga.
3. Darshana: Its meaning, definitions and objectives, Salient features of Bharatiya Darshana (Indian Philosophy), Philosophy; its meaning, definitions and scope, Main branches of Philosophy, Distinction between Indian Philosophy and Western Philosophy.
4. Branches of Bharatiya Darshana (Astika and Nastika Darshanas), General introduction to Shad-darshana, with special emphasis on Samkhya, Yoga and Vedanta Darshanas, General introduction to Nastika Darshan.
5. General introduction to Vedas, Upanishads, Prasthanatrayee and Purushartha Chatushtaya, Goal of human life.

## UNIT – II: Brief Survey of Yogic Traditions

[14 Hrs.]

1. **Elements of Yoga in Vedic Traditions:** Brief introduction to the nature of Yoga in Vedas and Upanishads, Concept of Pancha-kosha, Nature of Yoga in Darshanas, Nature of Yoga in Epics (Ramayana and Mahabharata), Nature of Yoga in Smritis, Puranas, Aagamas, and Tantras, Concepts of Nadi, Prana, and Kundalini in Tantra, Elements of Yoga in Narada Bhakti Sutra, Nature of Yoga in Ayurveda.
2. **Yoga in Jain and Buddhist Traditions:** Syadvada (Theory of Sevenfold Predications (Sapta-bhangi) Concept of Ratnatraya, Concept of Kayotsarga / Preksha-dhyana. Concept of Arya-satyas (Four Noble Truths), Concepts of Arya-ashtangika-marga and Vipassana (Insight Meditation).
3. **Yoga in Middle Ages :** Elements of Tantric Yoga, Roots of Hatha Yoga, Natha Parampara, Bhakti Yoga of Medieval Saints, Elements of Yoga in Sufism, Sufi Meditation Techniques, Elements of Yoga in Sikhism, The path of Sahaja Yoga or Nama Yoga of Guru Nanak.
4. **Yoga in Modern Times:** Yoga Traditions of Sri Ramakrishna and Swami Vivekananda, Yoga of Maharishi Raman, Integral Yoga of Shri Aurobindo.
5. **Yoga in Contemporary Times:** Brief Introduction to some important Yoga Paramparas (lineages) of contemporary times; Yoga Parampara of Yogacharya Sri T. Krishnamacharya, Swami Shivanada Saraswati, Paramahansa Madhavadas, Swami Rama of Himalayas, Maharshi Mahesh Yogi, Swami Dharendra Brahmachari and their contributions for the development and promotion of Yoga.

## UNIT-III: Introduction to Schools of Yoga

[14 Hrs.]

1. **General Introduction to Schools of Yoga:** Brief introduction to Schools (Streams) of Yoga; Yoga Schools with Vedanta Tradition (Jnana, Bhakti, Karma and Dhyana), Yoga Schools with Samkhya Yoga Tradition (Ashtanga Yoga of Maharshi Patanjali), Some Yogic Schools of Tantric Tradition (Hatha Yoga, Swara Yoga and Mantra Yoga) and Yoga Schools with Non-Vedic Traditions (Bauddha Yoga).
2. **Jnana Yoga:** Meaning of Jñāna and Jñāna-Yoga, Sadhana-chatushtaya, Means of Jñāna-Yoga.
3. **Bhakti Yoga and Karma Yoga:** Meaning of Bhakti and Bhakti Yoga, Stages of Bhakti, Types of Bhakti, Means of Bhakti Yoga; Meaning of Karma and Karma Yoga, Concept of Nishkama Karma, Means of Nishkama Karma, Inter relationship between Bhakti-Yoga and Karma-Yoga,

4. **Patanjala Yoga and Bouddha Yoga:** Brief introduction to Ashtanga Yoga of Patanjali and Arya-ashtangika-marga (Noble-eight-fold-path of Buddha) (Bauddha Yoga).
5. **Hatha Yoga:** Hatha Yoga Practices (Sadhanas), Relevance of Hatha Yoga sadhana in day-to-day life.

#### **BOOKS FOR REFERENCE**

- David Frawley : Vedic Yoga , MLBD, New Delhi, 2015
- Karel Werner : Yoga and Indian Philosophy, MLBD, New Delhi, 1977.
- Radhakrishnana, S : Indian Philosophy, (Vol. I &II) George Allen & Unwin, London, 1971.
- Swami Prabhavananda : Spiritual Heritage of India, Genesis publishing Pvt. Ltd., New Delhi, 2003.
- Swami Vivekananda : The Four Yogas of Swami Vivekananda, Ramakrishna Vedanta Centre Advaita Ashrama, 1996.
- Singh, S.P.& Chattopadhyaya, D.P. : History of Yoga, MLBD, New Delhi, 2010.
- Singh, S.P.& Yogi Mukesh : Foundations of Yoga, Standard Publishers, India, 2010.
- Dasgupta, S.N. : Yoga Philosophy, MLBD, Varanasi, 1974.
- Saraswati, Swami Satyananda : Kundalini Yoga, Yoga Publication Trust, Munger, 2005.
- Kalyan : Upanihads, (23<sup>rd</sup> year special), Gita Press, Gorakhpur.
- Avalon, Arthur : The Serpent Power, Shivalik Prakashan, Delhi, 2005.
- Gharote, M.M. : Traditional theory of Evolution and its Application in Yoga, Lonavla Yoga Institute Lonavla, 2008.

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/ Open Discussion	05
<b>Total</b>	<b>20</b>

**YSc BSc C 1 P: Practicals–I;**

**2 credits, 52hrs.**

Study the meaning, procedure and benefits of following yogic practices with references and practice.

1. Jalaneti
2. Kapalabhati
3. Swastikasana
4. Vajrasana
5. Suptavajrasana
6. UrdhvaVajrasana
7. Tadasana–1
8. Tadasana-2
9. SuryaNamaskara-12 vinyasa
10. Trikonasana
11. Parsvakonasana
12. Virabhadrasana
13. Pascimatanasana- I
14. Purvottanasana
15. Vakrasana
16. Pavanamuktasana
17. Bhujangasana
18. Salabhasana
19. Dhanurasana
20. Ustrasana
21. Upavistakonasana
22. Padottanasana
23. UjjayiPranayama

24. Anuloma-Vilomapranayama
25. Savasana–0

#### **ReferenceBooks:**

1. Iyengar, B. K. S. (2003), Light on Yoga, Published by Harper Collins Publishers, India, Block A, 75, Kamal Marg, Block A, Sector 57, Noida, Uttar Pradesh 201307.
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Ganga Darshan, Fort, Munger, Bihar - 811201.
3. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore-574279.
4. Jois Pattabhi (1962), Yoga Mala–PartI, Published by Asthangayoga Nilaya, Mysore, #235,8th Cross Rd, 3rd Stage, Gokulam, Mysuru, Karnataka 570002.

<b>Formative Assessment/IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **I SEMESTER**

**YSc BSc C 2: Foundations and Practices of Hath Yoga;**

**3 Credits, 42 Hrs**

#### **Learning Objective:**

By introducing Hatha Yoga & its texts, students shall be able to

- Have an understanding about pre-requisites, principles about Hatha Yoga.
- Understand the relationship between Hatha and Raja Yoga.
- Have an understanding about the concept of Hatha Yoga in Classical texts.

**Learning Outcome:** By learning, candidate is expected to get;

- Knowledge of classical text as a reference for the various Yoga practices.
- Ability to give classical reference to the Yoga practices in future.
- Ability to co-relate breathing mechanism and the practices Yoga.

#### **UNIT – I: General Introduction to Hatha Yoga**

**[14 Hrs.]**

1. Hatha Yoga: Origin, Meaning, Definition, Aim, Objectives and Misconceptions
2. Hatha Yoga: Its Philosophy and Foundations, Hatha Yoga Parampara,
3. Brief Introduction to eminent Hatha Yogis of Natha Cult and their contributions for the development of Yoga
4. Asanas: Concept, Etymology, definition and principles of Asanas, Relevance and importance of asanas in Hatha Yoga Sadhana
5. Shatkarma: Introduction to Shatkarma and their relevance in Hatha Yoga Sadhana, Shatkarmanas as mentioned in different Hatha Yogic Texts.

#### **UNIT – II: Introduction to Hathayoga Texts, Pranayama, Pre-Requisites**

**[14 Hrs.]**

1. General Introduction to Hatha Yoga Text; Siddhasiddhantpaddhati, Hathapradipika, Gorkshashatkam, Hatharatnavali and Gheranda Samhita with reference to their author, nature and practices.
2. Pranayama: Concept, Etymology and definitions of Prana and Pranayama in Hatha Yogic texts, Relevance and Importance of Pranayama in Hatha Yoga Sadhana.
3. Bandhas: Etymology, relevance and importance of bandhas in Hatha Yoga Sadhana.
4. Mudras: Concept, Etymology, Importance and their relevance in Hatha Yoga Sadhana, Mudras as mentioned in Hatha Yogic texts
5. Rules and regulations to be followed by Hatha Yoga practitioners (Do's and Don'ts), Ten, Yama and Niyama and their relevance in Hatha Yoga Sadhana

**UNIT – III: Hatha Yoga Principles****[14 Hrs.]**

1. Introduction to Tantra Yoga and its relationship with Hatha Yoga
2. Concept of Swas-prashwas, Vayu, Prana and Upaprasna
3. Concept of Kand, Nadi, Swar, Chakra and Granthi
4. Concept of Kundalini & Kundalini prabodhana, Unmaniavastha, Nadanusandhana
5. Swara, Importance of Svarodaya-Jnana in Hatha Yoga Sadhana.

**BOOKS FOR REFERENCE**

1. Sahay G.S.: HathaYogaPradeepika by Svatmarama, MDNIY Publication, 2013
2. Sharma BR: Jotsna (Comentory of HathaYogaPradeepika) Kaivalyadhama, Lonavala, 2013
3. Gharote ML: Hatharatnavali, The Lonavala Yoha Institute, Lonavala, Pune, IInd Edition, 2009
4. Swami Kuvalyananda & Shukla, S. A.: Gorakshasatkam, Kaivalyadhama, Lonavla, 2006
5. Gharote M.L. & Pai, G.K. (Edi): Siddhasidhantpaddhati, Kaivalyadhama, Lonavla, 2005.
6. PLRD: Vasistha Samhita, Kaivalyadhama Samiti, Lonavla, 2005.
7. Korpai, Nitin & Shankar, Ganesh: Hatha Yoga and Human Health, Satyam Publishing House, New Delhi, 2005.
8. Swami Digambarji & Gharote M. L.: Gheranda Samhita, Kaivalyadhama, Lonavla, 1978.
9. Swatmaramaji: Hathapradipika (Jyotsana- tika), Adyar Library, Madras.
10. Bharati, Swami Veda Reddy Venkata: Philosophy of Hatha Yoga (English) Himalayan, Pennsylvania.
11. Swami Muktibodhananda: Swara Yoga: Yoga Publication Trust, Munger, India

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
ClassTest (Two Class Tests)	15
Seminar/ Class Work / Assignment/ Open Discussion	05
<b>Total</b>	<b>20</b>



Study the meaning, procedure and benefits of following yogic practices with references and practice.

1. Sutraneti
2. Trataka Kriya
3. Swastikasana
4. Siddhasana
5. Padmasana
6. Tadasana–1
7. Tadasana–2
8. Tiryaktadasana
9. Katiparivarta
10. Ardhaaandrasana
11. VaidikaSuryanamaskara –9 Vinyasa.
12. Padangusthasana
13. Parsvottanasana
14. Purvottanasana
15. Janusirsasana
16. Maricasana–I
17. Navasana
18. Kurmasana
19. Jatharaparivarta
20. Bharadvajasana
21. Ardhamatsyendrasana
22. Uttanapadasana
23. Ujjayi pranayama
24. Anuloma-Vilom pranayama
25. Savasana-1

**Reference Books:**

1. Iyengar B.K.S. (2003), Light on Yoga, Published by Harper Collins Publishers, India, Block A, 75, Kamal Marg, Block A, Sector 57, Noida, Uttar Pradesh 201307.
2. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Ganga Darshan, Fort, Munger, Bihar 811201.
3. Bhat, K. Krishna (2006), The Power of Yoga, Suyoga Publications, Mangalore-574

279.

4. Jois, Pattabhi (1962), Yoga Mala–Part I, Published by Asthangayoga Nilaya, Mysore, #235,8th Cross Rd, 3rd Stage, Gokulam, Mysuru, Karnataka 570002.

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	05
Assisting in Practical of Yoga Camps.	05
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **I SEMESTER**

#### **YSc BSc C 3: Human Anatomy and Physiology I;**

**5 Credits, 52 Hrs**

**Learning Outcome:** Following the completion of the course, students shall be able:

- To know about the structure of the body
- To know about the necessary functions of the body
- To give brief idea about the diseases related to each system

**Learning Outcome:** At the completion of the paper the students are expected to attain;

- Understanding of human body structure and mechanism.
- Ability to understand the biomechanics of various yoga practices.
- Basic knowledge of various systems needed in future as a Yoga therapist.

#### **Unit-1: General Introduction to Physiology**

**13Hrs**

1. Electron microscopic structure of organelles of eukaryotic cells. Structure of membrane. Membrane transport. Functions of organelles of eukaryotic cells.
2. Histological structure, classification, distribution and function of different tissues. Organization of cells into tissue to organs and systems of human body.
3. Definition of Human Anatomy and Human Physiology. Terms frequently used in Anatomy and Physiology. Planes of body. Homeostasis. Mechanisms to maintain milieu environment.

#### **Unit-2: General Physiology Skeletal system and Nerve – muscle physiology**

**13Hrs**

1. Skeletal system: structure and functions of bone, Classification of bone. Classification of skeleton. Joints. Types of joints their structure and function.
2. Neurons, Nerve fibre. Synapse. Neurotransmitter, Reflex action, Mechanism of nerve conduction, Synapse and synaptic transmission,
3. Types of Muscle in the body. Structure of skeletal, cardiac and smooth muscle. Properties of muscle. Mechanism of muscle contraction. Types of muscular contraction. Neuro – muscular junction.

#### **Unit-3: Haematology, Lymphoid organ and Immunity**

**13Hrs**

1. Haematology: Blood Volume. Composition and function of blood. Haemoglobin and anaemia. Blood clotting. Blood groups and their importance.
2. Lymphoid organs - Thymus, spleen, Lymph node, Composition and function of lymph.

3. Immunity, Types of immunity, Antigen and antibody, Hypersensitivity reaction, Autoimmunity

#### **Unit-4: Biomolecules, and Digestive system**

**13Hrs**

1. Biomolecules: Carbohydrates, Fats, Proteins, Minerals, Vitamins, Dietary fibres balanced diet.
2. Structure and anatomical position of primary and secondary digestive organ.
3. Functions of digestive system. Physiology of digestion and absorption. Movements of GI tract. Malnutrition and over nutrition. GI hormones and Endocrine function of Pancreas.

#### **REFERENCE BOOKS:**

1. Singh, Inderbir: Anatomy and Physiology for nurses, Jaypee Brothers, New Delhi.
2. Raju SM; Madala, Bindu: Anatomy and Physiology for general nursing.
3. Guyton and Hall: Text book of Medical Physiology
4. Chaurasia, BD: Human Anatomy
5. Jain AK: Text Book of Physiology (Volume I and II), Avichal publishing company
6. Sembulingam K; Sembulingam P: Essentials of Physiology for Dental students.
7. Bijlani R. L.: Understanding of Human Physiology, Jaypee Brothers Medical Publishers Pvt. Ltd, New Delhi, 2011
8. Pal G. K & others: Textbook for practical Physiology, Orient Longman Pvt. Ltd, Hyderabad, 2007
9. Mahapatra A.B.S.: Essential of medical Physiology, Current book Int.
10. Khurana I: Text book of Medical Physiology

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/ Open Discussion	05
<b>Total</b>	<b>20</b>

## **BSc Yogic Science**

### **II SEMESTER**

#### **YSc BSc C 4: Yoga in Principal Upanishads**

**3 Credits, 42 Hrs**

#### **Learning Objectives:**

Following the completion of this course, student will be able to

- Have an idea about the major principal Upanishads
- Understand the essence of each Upanishad and how to put them into practice.
- Understand each Upanishad and the role of it in our day-to-day life.

**Learning outcome:** The paper is expected to bring about;

- Ability to understand the essence of Yoga in Upanishads.
- Comprehensive knowledge of aupanishadic yoga and co-relate with other schools of Yoga.
- In-depth clarity towards the aim and objectives of Yoga Darshana.

#### **Unit -I: Introduction to Upanishads**

**[14 Hrs.]**

1. Etymology and meaning of Upanishad, subject matters of Upanishads, Number of Upanishads.
2. Brief Introduction to Principal Upanishads- Isha, Kena, Katha, Prashna, Mundaka, Mandukya.
3. Brief Introduction to Principal Upanishads- Aitreya, Taittiriya, Brihadaranyaka & Chhandogya Upanishad.
4. Brief Introduction to Yogopanishads.
5. An Introduction to Upanishadic Philosophies; Antiquity of Upanishads; Prasthanatraya.

#### **Unit-II: Essence of Principal Upanishads**

**[14 Hrs.]**

1. **Prashnopanishad:** Creation of the universe, Prana and its functions, states of dream and deep sleep, Para and Apra Brahman.
2. **Mundaka:** Para and Apra Vidya, nature of Brahman, Jiva and Moksha.
3. **Mandukyopanishad:** Nature and significance of OM (AUM), The fourth states of being, Jiva and Moksha.
4. **Aitareya:** Creation of Universe, nature of Atman, Brahman as Prajnana.

**Unit-III: Yogatattvas in Yogopanishads****[14 Hrs.]**

1. **Chandogya**: Nature of Brahman (Prana as Brahman), Nature of Jivatman, Sat as the cause of Universe, Meditation (Samvarg Vidya, Shodhshkala brahma Vidya, Upakoshala Vidya) Archiradi Marga.
2. **Brihadaranyakam**: Two form of Brahman, Teaching of Yajnavalkya, Brahman and Universe, theory of Atman as Svayamjyoti, nature of Self in different states, The ways and Means of realising Brahman.
3. **Taitriya**: Definition and nature of Brahman, Evolution of Universe, the concept of Panchkosha.

**Books for Reference**

1. The Principal Upanisads, Radhakrishnan, S Harpercollins India, 2006
2. Ishadi nau Upanishad, Gita press Gorakhpur
3. Nine Principal Upanisads, Saraswati, Swami Satyanand Yoga Publication Trust Bihar, 2004.
4. Upanishads, Swami Ranganathananda Bharatiya Vidya Bhavan, Bombay, 1985
5. 108 Upanishad - (Sadhana Khand, Brahmavidya Khand, Jnana Khand) Sharma, Pt. Sriram Acharya, Shantikunj, Haridwar.
6. The Essence of Principal Upanishads, Sivananda, Swami, Divine Life Society, 1980
7. The Philosophy of the Upanishads, Chari, S.M. Srinivasa Munshiram Manoharlal, Delhi, 2002.
8. Upanishad Sangraha - Jagdish Shashtri, Motilal Banarasidas, Varanasi, Delhi, Chennai.

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/ Open Discussion	05
<b>Total</b>	<b>20</b>

**YSc BSc C 4 P: Practicals – III;****2 credits; 52Hrs.**

Study the meaning, procedure and benefits of following yogic practices with references and practice.

1. Swastikasana
2. Tadasana–parsva
3. Suryanamaskara-17Vinyasa
4. Utthitapadangustasana
5. Parivrttatrikonasana
6. Prasaritapadottanasana-I
7. Dandasana
8. Bhekasana
9. Pascimottanasana-II
10. Purvottanasana
11. Ardhabaddhapadmapascimottanasana
12. Tiryanmukhaikapadapascimottanasana
13. Suptapadangustasana
14. Urdhvamukhapascimottanasana
15. Baddhakonasana
16. Simhasana
17. Akarnadhanurasana
18. UjjayiPranayama
19. Anuloma-Vilomapranayama
20. Savasana-2

**Reference Books:**

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-574279.

4. Jois, Pattabhi (1962), Yogamala – Part I, Published by Asthangayoga Nilaya, Mysore.

<b>Formative Assessment/IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	05
Report of visiting Yoga Centers/Yoga Institutions	05
<b>Total</b>	<b>10</b>



## **BSc Yogic Science**

### **II SEMESTER**

**YSc BSc C 5: Hatha Yoga of Svathmarama**

**3 Credits, 42 Hrs**

#### **Learning Objectives:**

By introducing Hatha Yoga & its texts, students shall be able to

- Understand about pre-requisites, principles about Hatha Yoga.
- Understand the relationship between Hatha Yoga and Raja Yoga.
- Understand different Hatha Yogic Techniques according to Hathapradipika.

#### **Learning Outcome:**

- Clarity regarding the aim of Hathayoga and the proper practicing method.
- Concept of food according to Yoga and its application in Yoga sadhana and daily life.
- Get introduced to various advanced practices of Yoga.

#### **Unit- I Hatha Yoga Parampara, Asanas and Yogic Diet in Hathayogapradipika 14Hrs**

1. Hatha Yoga: Goal of Hatha Yoga, Relationship between Hatha Yoga and Raja Yoga, Hathayogis in Hathayogapradipika, Importance of Hatha and its secrecy.
2. Requisites of Hatha Yoga Practices: Time, Place, Concept of Matha.
3. Asanas: The techniques, benefits, precautions and contra-indications of Asanas as mentioned in Hathapradipika.
4. Mitahara, Pathya and Apathya, Rules in food taking,
5. Badhaka Tattva (Obstacles) and Sadhaka Tattva (Facilitatory factors), Hathasiddhilakshana

#### **Unit- II Pranayamas, Kriyas and Kundalini in Hatha Yoga Pradipika 14 Hrs**

1. Shatkarma: Techniques, benefits, precautions and contraindications of Shatkarmas – Dhauti, Basti, Neti, Nauli, Tratak and Kapalabhati as mentioned in Hathapradipika.
2. Pranayama: techniques and benefits, Nadishuddhi Pranayama, symptoms of Nadishuddhi, Duration and time for Pranayama practice, Importance of Pranayama practice Levels of Pranayama.
3. Yukta and Ayukta Pranayama, Role of Diet in Pranayama practice. Types of aspirants, Manonmani.
4. Classification of Kumbhaka and its benefits, Hatha Yoga siddhi lakshana.
5. Kundalini as base for all Yoga. Results of Kundalini Prabodha, Synonyms for Sushumna.

### **Unit- III Mudras & Bandhas, Nadanusandhana and Samadhi in Hatha Yoga Pradipika 14 Hrs**

1. Mudras and Bandhas-classification, benefits and methods of practice.
2. Different types of Nada, Condition of Yogi in Unmani Avastha, Realisation.
3. Methods of Samadhi Practice, Samadhi in Hathayogapradipika
4. Techniques and benefits of Shambhavimudra, Unmani, Khechhari, Nadanusandhana, Kandaswarupa.

#### **Reference Books**

1. Swami Digambaraji (1970), Hathapradipika of Swatmarama, Kaivalyadhama, Lonavala, Pune - 410403.
2. Swami Niranjananda Saraswati, Gherandasamhita, Bihar School of Yoga, Munger, Bihar-811201.
4. Swami Niranjanananda, Yoga Darshan, Sri Pachadashanam Paramahansa Alakh Bara, Deoghar- 814113.
5. Swami Digambaraji(1997), Gheranda Samhita, SMYM Samiti, Kaivalyadhama, Lonavala-410403
6. Swami Atmananda(1966), The Four Yogas, Bharatiya Vidya Bhawan, Bombay-400007
7. Korpai, Nitin & Shankar, Ganesh:HathaYoga and Human Health, Satyam Publishing House, New Delhi, 2005.
8. Garote ML (2000), Hata Pradipika Vrutthi, Lonavala Yoga Institute, Lonavala.
9. Athavale Jayantha Balaji ed & Kunda Jayantha Athavalied(2000). Hatha Yoga, Sanathana Samste, Goa.
10. Sahajananda Nath (2006), Hata Yoga Manjari, Kaivalyadhama Srimanmadhav Yoga Mandir Samiti.
11. Sharma B. R: Jotsna (Comentory of HathaYogaPradeepika), Kaivalyadhama, Lonavala, 2013.
12. Mukthi Bodhananda (2012), Hatha Yoga Pradipika – Light on Hatha Yoga, Yoga Publication Trust, Munger.
13. Svathmarama (2000), The Hatayogapradipika, with the commentary Jyotsna of Brahmananda and English translation the Adyar Library and Research Centre, The theosophical society, Adyar Chennai 600020.
14. Sahay G. S: Hatha Yoga Pradeepika, MDNIY, New Delhi, 2013

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/ Open Discussion	05
<b>Total</b>	<b>20</b>

**YSc BSc C 5P: Practicals – IV;**

**2 Credits; 52Hrs.**

Study the meaning, procedure and benefits of following yogic Practices with references and practice.

1. Swastikasana
2. Baddhapadmasana
3. Padahasthasana
4. Prasaritapadottanasana–II
5. Virabhadrasana -II
6. Ardhabaddhapadmottanasana
7. Garudasana
8. Utkatasana
9. Maricasana-2
10. Ardhanavasana
11. Pasasana
12. Tiryakbhujangasana
13. Dhanurasana-parsvasahita
14. Paryankasana
15. Vrksasana
16. Viparitakarani
17. Halasana
18. Uttanapadasana
19. UjjayiPranayama
20. Anuloma-Vilomapranayama
21. SohamMeditation
22. Savasana-2

**Reference Books:**

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), Yogamala–Part I, Published by Asthangayoga Nilaya, Mysore.

<b>Formative Assessment/IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	05
Practical Teaching in Yoga Camp/Yoga Training	05
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **II SEMESTER**

**YSc BSc C 6: Human Anatomy, Physiology and Biochemistry**

**3 Credits, 52 Hrs**

#### **Learning Objectives:**

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

- To know about the structure of the body
- To know about the necessary functions of the body
- To give brief idea about the diseases related to each system

**Learning Outcomes:** At the completion of the paper the students are expected to attain;

- Understanding of human body structure and mechanism.
- Ability to understand the biomechanics of various yoga practices.
- Basic knowledge of various systems needed in future as a Yoga therapist.

#### **Unit-1: Respiratory system**

**[13 Hrs.]**

1. Structure of tracheobronchial tree and respiratory unit. Anatomical position of lungs.
2. Mechanism of breathing (Expiration and inspiration); Exchange and transport of respiratory gases (oxygen and carbon dioxide). Lung function test.
3. Exercise adaptation of respiratory system

#### **Unit-2: Cardiovascular system**

**[13Hrs.]**

1. Structure of heart. Anatomical position of heart in thoracic cage.
2. Cardiac output and cardiac cycle. Pumping of heart. Heart rate. Blood pressure and regulation of blood pressure. Electrocardiography.
3. Functional anatomy of blood vessels.
4. Organisation of systemic and pulmonary circulation.
5. Exercise adaptation of cardiovascular system.

#### **Unit - 3: Introduction to Bio-chemistry - 1**

**[13 Hrs.]**

1. Introduction of Biochemistry, Aim and scope, Biochemical composition of living organism, Elemental and chemical composition.
2. Introduction of solvents, water as biological solvent, concentration units, osmolarity
3. pH and buffers, weak acids and bases, Handerson-Hasselbalch equation, physiological buffers, isoelectric pH.

**Unit - 4: Introduction to Bio-chemistry – 2****[13 Hrs.]**

1. Biological oxidation-reduction reactions, redox potentials, relation between standard reduction potentials.
2. Concept of free energy, High energy phosphate compounds – introduction, phosphate group transfer, and free energy of hydrolysis of ATP and sugar phosphates.

**REFERENCE BOOKS:**

1. Singh, Inderbir: Anatomy and Physiology for nurses, Jaypee Brothers, New Delhi.
2. Raju SM; Madala, Bindu: Anatomy and Physiology for general nursing.
3. Guyton and Hall: Text book of Medical Physiology
4. Chaurasia, B D: Human Anatomy
5. Jain A K: Text Book of Physiology (Volume I and II), Avichal publishing company
6. Sembulingam K; Sembulingam P: Essentials of Physiology for Dental students.
7. Bijlani R. L.: Understanding of Human Physiology, Jaypee Brothers Medical Publishers Pvt. Ltd, New Delhi, 2011
8. Pal G. K & others: Textbook for practical Physiology, Orient Longman Pvt. Ltd, Hyderabad, 2007
9. Mahapatra A.B.S.: Essential of medical Physiology, Current book Int.
10. Khurana I: Text book of Medical Physiology.
11. Biochemistry By U. S. Satyanarayana
12. T. Palmer, P. Bonner. 2007. Enzymes: Biochemistry, Biotechnology, Clinical Chemistry (2nd Ed.), Woodhead Publishing House, Chichester, England.
13. Harper's review of physiological chemistry by Harper.
14. D.L. Nelson, M.M. Cox. 2008. Lehninger Principles of Biochemistry, W.H. Freeman and Company, New York, USA.
15. J.M. Berg, J.L. Tymoczko, L. Stryer. 2008. Biochemistry, W.H. Freeman and Company, New York.
16. G. Zubey. 1993. Biochemistry, Wm. C. Brown Publishers, Oxford. U.K.

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/Class Work/ Assignment/Open Discussion	05
<b>Total</b>	<b>20</b>

## **BSc Yogic Science III SEMESTER**

**YSc BSc C 7: Patanjala Yoga Darshana – I**

**3 Credits, 42 Hrs**

### **Learning Objectives:**

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

- Understand various modification of mind and the means of inhibiting them.
- Have an understanding about the essence of Samadhi.

### **Learning Outcome:**

- Foundation for authentic practicing method of Yoga with aim, objectives and result.
- Understanding of important aspect, the citta and its nature.
- Understanding and orientation towards advanced practices of Yoga.

### **Unit - 1: Introduction to Yoga darshana of Patanjali**

**[14 Hrs.]**

1. Introduction to Yoga Darshana and its relevance in Yoga Sadhana.
2. Theory of Evolution and Meta-physics of Yoga Darshana.
3. Brief introduction to Maharshi Patanjali and Patanjala Yoga Sutra.
4. Brief Introduction to traditional commentators and commentaries of Patanjala Yoga Sutra: Vyasa Bhasya, Tatvavaisharadi, Bhoja Vritti and Yoga-vartika.
5. Concept of Antahkaran: Mana, Buddhi, Ahankar and Chitta.

### **Unit - 2: Concept of Chitta: its bhoomis, vrittis and Nirodhopayas**

**[14 Hrs.]**

1. Concept of Chitta and Chitta Bhoomis.
2. Concept of Chitta Vrittis and their classification.
3. Chitta vritti Nirodhopaya: Abhyasa and Vairagya.
4. Concept of Ishwar and Ishwar pranidhana.
5. Concept of Vikshepas: Antarayas, Concept of Chitta prasadanam.

### **Unit - 3: Varieties of Samadhi**

**[14 Hrs.]**

1. Concept of Yoganushasanam, Yoga Lakshanam and its results.
2. Types of Samadhi: Samprajnata and Asamprajnata Samadhi.
3. Types of Samprajnata Samadhi: Vitarka, Vichara, Anand and Ashmita.
4. Concept of Samapatti, Types of Samapatti: Savitraka and Nirvitraka, Savichara and Nirvichara.

5. Types of Asamprajnata Samadhi: Bhavapratyaya and Upayapratyaya, Adhyatma-Prasadanam and Ritambhara-Prajna.

### TEXT BOOKS

1. Swami Digambara Ji and others: Glossary of the Sankhyakarika, Kaivalyadhama, Lonavala, 2012
2. Swami Virupaksananda: Sankhyakarika of Isvarakrisna (with tattva Kamudia of Vachaspati Mishra), Sri Ram Krishna Matha Madras, 1995
3. James R. Ballantyne: The Sankhya Aphorisms of Kapila, Parimal Publications, New Delhi, 2004

### BOOKS FOR REFERENCE

1. V.V. Sovani: A critical study of the Sankhya System, Chukhambha Sanskrit Pratisthan, New Delhi, 2005
2. M.R. Yardi: The Yoga of Patanjali, Bhandarkar Oriental Research Institute, Poona, India, 1970
3. K.D. Prithvipaul: The Yogasurta of Patanjali M.L.B.D. New Delhi
4. Gaspar M. Koelmenn, S.J: Patanjali Yoga, Papal Athenaeum, Poona, 1970
5. Swami Ved Bharti: Yogasutra of Patanjali (with the Exposition of Vyasa) M.L.B.D. New Delhi, 2004, Vol I & II

Formative Assessment/ IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/Open Discussion	05
<b>Total</b>	<b>20</b>

### YSc BSc C 7 P: Practicals – V;

**2 Credits; 52Hrs.**

Study the meaning, procedure and benefits of following yogic practices with references and practice.

1. Svastikasana
2. Padmasana
3. Yogamudrasana
4. Dolasana
5. Bhadrasana
6. Kukkutasana



7. Prasaritapadottanasana -III
8. Prasaritapadottanasana– IV
9. Maricasana– 3
10. Maricasana – 4
11. Urdhvaprasrtahastapadasana
12. Ubhayapadangusthasana
13. Ekapadasirsasana
14. Suptapadangusthasana – Parsvasahita
15. Setubandhasana
16. Sarvangasana
17. Suptakonasana
18. Urdhvapadmasana
19. Matsyasana
20. Ujjayi Pranayama
21. Anuloma-Viloma pranayama
22. Pranava Meditation
23. Savasana-2

**Reference Books:**

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.

<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science III SEMESTER**

**YSc BSc C 8: Human Anatomy & Physiology-II**

**3 Credits, 42 Hrs**

### **Learning Objectives:**

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

- To know about the structure of the body
- To know about the necessary functions of the body
- To give brief idea about the diseases related to each system.

**Learning Outcomes:** At the completion of the paper the students are expected to attain;

- Understanding of human body structure and mechanism.
- Ability to understand the biomechanics of various yoga practices.
- Advanced knowledge of various systems needed in future as a Yoga therapist.
- Ability to co-relate and understand the various bio-physical, bio-chemical psychophysiological changes induced by Yoga practice.

### **Unit -1: Nervous system and special senses**

**[14 Hrs.]**

1. Structure human brain. Anatomical position of different parts of brain. Structure of spinal cord and tracts.
2. Cognition, memory, executive function. Function of spinal cord, Cranial nerve and spinal nerve.
3. Peripheral nervous system: Autonomic nervous system. Somatosensory nervous system.
4. Special senses. Structure and function of eye, ear, nose, tongue and skin.

### **Unit -2: Endocrinology and Reproductive system**

**[14 Hrs.]**

1. Overview of endocrine system. Mechanism of hormone action.
2. Structure and location of Major of endocrine glands such as Pituitary, Adrenal, Thyroid, Parathyroid.
3. Secretion and function of Major of endocrine glands such as Pituitary, Adrenal, Thyroid, Parathyroid, and Endocrine function of Pancreas. local hormones. Endocrine function of other organs.
4. Functional anatomy of male and female reproductive system.
5. Menstrual cycle. Gametogenesis. Fertilization. Pregnancy, menopause.

**Unit -3: Excretory system****[14 Hrs.]**

1. Functional anatomy of kidney, ureter, urinary bladder, urethra.
2. Excretory system of human. Kidney. Mechanism of urine formation-Ultrafiltration, selective reabsorption. Counter current mechanism. Tubular secretion. Role of kidney in osmoregulation.
3. Role of other organs on excretion in humans.
4. Acid base balance.

**References:**

1. Jain AK: Text Book of Physiology (Volume I and II), Avichal publishing company
2. Singh, Inderbir: Anatomy and Physiology for nurses, Jaypee Brothers, New Delhi.
3. Raju SM; Madala, Bindu: Anatomy and Physiology for general nursing.
4. Guyton and Hall: Text book of Medical Physiology
5. Chaurasia, BD: Human Anatomy
6. Sembulingam K; Sembulingam P: Essentials of Physiology for Dental students.
7. Bijlani R. L.: Understanding of Human Physiology, Jaypee Brothers Medical Publishers Pvt. Ltd, New Delhi, 2011
8. Pal G. K & others: Textbook for practical Physiology, Orient Longman Pvt. Ltd, Hyderabad, 2007
9. Mahapatra A.B.S.: Essential of medical Physiology, Current book Int.
10. Khurana I : Text book of Medical Physiology

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/ Open Discussion	05
<b>Total</b>	<b>20</b>

**YSc BSc C 8: Practicals – VI;****2Credits; 52 Hrs****Objectives:**

The objectives behind teaching Anatomy and Physiology are to

- Understand the principles and procedure of every experiment.
- Demonstrate an experiment with the interpretation of the results.

- Explain the procedure of each step of an experiment skilfully.
- Make students familiar with the systems of the body using models, charts and pictures.

#### **Learning outcome:**

- Students shall develop ability to work in Research centers and Hospitals.
- Students will be skilled to take-up interdisciplinary research studies.

#### **Unit-1: Haematology, osteology and myology**

1. Haemoglobin estimation. Recording bleeding time, Recording Clotting time, ABO Blood grouping.
2. Total Red Blood Cell Count. Total White Blood Cell Count. Differential WBC Count.
3. Localization of bones and muscles using charts, models.

#### **Unit-2: Human Physiological experiment**

1. Measurements of Weight, stature, Body Mass Index, Body Surface Area.
2. Recording of Blood Pressure and pulse rate.
3. Vitalography. Effects of posture on vitalography.

#### **PRACTICAL GUIDE**

1. Jain AK: Manual of Practical Physiology for BDS, Arya Publications

<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **III SEMESTER**

**YSc BSc C 9: Study of Ghatayoga; Practices in Goraksha Shathaka** **5 Credits; 52 Hrs**

**Learning Objectives:** By introducing Hatha Yoga & its texts, students shall be able to

- Understand about Ghata, Ghatastha Yoga.
- Understand about different types of Mudra
- Understand different Hatha Yogic Techniques according to Gheranda Samhita.

**Learning Outcomes:** After studying the paper, the candidate shall be;

- Able to know about varieties of Hathayoga traditions.
- Knowing many varieties of different Hathayoga techniques.
- Therapeutical aspect of Hathayoga practices with their practicing method and benefits.

#### **Unit- I Ghata Yoga and its applications in Gheranda Samhita** **[14 Hrs.]**

1. Ghata Yoga – Introduction of Saptanga Yoga.
2. Satkriyas – Classification, Practising methods and benefits.
3. Asana– Classification, Practising methods and benefits.

#### **Unit- II Ghata Yoga and its applications in Gheranda Samhita** **[14 Hrs.]**

1. Mudra – Introduction, 25 Mudras – Classification.
2. Techniques of Practising Mudra and their benefits.

#### **Unit- III Pratyahara, Pranayama, Dhyana and Samadhi in Gheranda Samhita** **[14 Hrs.]**

1. Pratyahara–Classification, Practising methods and benefits.
2. Pranayama– Classification, Practising methods and benefits.
3. Meditation– Classification, Practising methods and benefits.
4. Classification of Samadhi and their practice
5. A comparative study of Hatha Yoga and Ghata Yoga.

#### **Unit-IV Hathayoga Practices in Gorakshasatakam** **[14 Hrs]**

1. Concept of Sadanga Yoga. Concept of Life.
2. Different components of Sadanga Yoga-Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi.
3. Nadi, Cakra and Kundalini in Gorakshashatakam, Control of mind.

#### **REFERENCE BOOKS**

1. Sadashivabrahmendra Saraswati (1978), Shivayogadipika, Ananda Ashrama Granthavali, Pune- 410403

2. Swami Niranjananda Saraswati, Gherandasamhita, Bihar School of Yoga, Munger, Bihar-811201
3. Swami Digambaraji (1997), Gheranda Samhita, SMYM Samiti, Kaivalyadhama, Lonavala-410403
4. Swami Vivekananda (1982), RajaYoga, Ramakrishna Ashrama Publications, Dehi Entally Road kolkata-700014.
5. Swami Digambaraji (1970), HathaYoga Pradipika of Swatmarama, Kaivalyadhama, Lonavala, Pune - 410403.
6. Swami Niranjanananda, Yoga Darshan, Sri Pachadashanam Paramahansa Alakh Bara, Deoghar-814113
7. Swami, Adidevananda (1998). Patanjala Yoga Darshana – Vyasa Bahshya sahitha, Shri Ramakrishna Ashrama, Mysore – 570020.
8. Swami, Niranjanananda (1997). Hathayogapradipika, Bihar School of Yoga-811201
9. Swami Kuvalayananda (2019). Gorakshashatakam, Kaivalyadhama Samiti Lonavla

ISBN: 9788189485443

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/ Open Discussion	05
<b>Total</b>	<b>20</b>

## **BSc Yogic Science**

### **III SEMESTER**

#### **Elective Course - 1**

**YSc BSc E – 1: Fundamentals of Naturopathy;**

**2 Credits, 42hrs.**

#### **Learning Objectives:**

- To introduce the basic principles of Naturopathy and its concepts.
- To understand Basic modalities of treatment in Naturopathy.
- To have an understanding about Benefits of Naturopathy and life style modification.
- To understand the role of Yoga in Naturopathy treatment.

#### **Expected Outcomes:**

- The student shall have the skill to use the principle of naturopathy treatment.
- The basics of naturopathy can be used by the student as a therapist.
- The student can involve in interdisciplinary studies.

#### **UNIT-1: INTRODUCTION TO NATUROPATHY**

**[14 Hrs.]**

1. Definition of Naturopathy and its basic principles, History of Naturopathy.
2. Definition of health and natural way of healthy living.
3. Comparative study of the Naturopathy with other systems of Medicine; Catechism of Nature cure.
4. Inflammation and its different stages; Natural rejuvenation and vitality.
5. Immunity: How to acquire natural immunity in diseases & its importance.

#### **UNIT-2: PRINCIPLES AND CONCEPTS OF NATUROPATHY**

**[14 Hrs.]**

1. Laws of Nature: Concept of Pancha Mahabhutas, Shareera Dharmas – Ahara, Nidra, Bhaya and Maithuna.
2. Importance of five elements (Pancha mahabhutas) - Ether, Air, Fire, Water and Earth of Nature with its origin, properties, and importance in Naturopathy.
3. Detailed study of vital force, natural immunity, healing crisis, foreign matter, importance of physical exercise and rest.
4. Importance of Physical and Mental Hygiene in Personal life and prevention of diseases. Concept of Detoxification in Naturopathy.
5. Arogya Rakshaka Panchatantras and their importance in maintaining good health and prevention of diseases.

6. The diagnostic procedures of Naturopathy – Spinal analysis, Facial Diagnosis, Iris diagnosis, Chromo Diagnosis and their diagnostic values.

### **UNIT-3: NATUROPATHY THERAPEUTICS**

**[14 Hrs.]**

1. Fasting-Physiological effects of fasting, indications and contraindications of fasting and methods of fasting, management of healing crisis during fasting. Dietetics and Nutrition- Balanced diet according to nature cure, nutritious and eliminative diet, Importance of acidic and alkaline diet and its physiological effects on body.
2. Mud therapy-History of mud therapy, properties of mud, techniques of using mud in nature cure, types of mud, and its therapeutic properties, contraindications and other uses of earth power.
3. Hydrotherapy-Physical and remedial properties of water, physiological effects of water at different temperature in human body, with their therapeutics effect, methods of treatment, indications, contraindications, precautions, management of crisis during treatment and after treatment.
4. Massage- Physiological effect of massage on body part, indications and contraindications. Marmas (Vital points), acupressure points with their importance in massage.
5. Chromo therapy- Method of using chromo therapy in nature cure, importance, physiological effects of 7 colors on glands, chakras and other body organ system- its indications and contradictions.

### **REFERENCE BOOKS:**

Arya, Jitendra	Health Naturally: Nature Cure for Common Diseases, Arya Publication, Pune, 2011.
Bernard Jensen	Foods That Heal: A Guide to Understanding and Using the Healing Powers of Natural Foods, Penguin, 1993.
Gala, Dhiren	Nature Cure for Common Diseases, Navneet Publications, Mumbai
Ghosh, A.K	Diet and Nutrition (English)
Henry Lindlahr	Philosophy and Practices of Nature Cure, Sat Sahitya Sahayogi Sangha, Hyderabad.
K. Laksmana Sarma, S. Swaminathan:	Speaking of Nature Cure, Sterling Publishers Pvt. Ltd, 2013.
Mahatma Gandhi	Key to Health, Create Space Independent Publishing Platform, 2017.
M.K.Gandhi	My Nature Cure
Parvesh Handa	Naturopathy and Yoga, Gyan Publishing House, 2006



S.R. Jindal	Nature Cure: A Way of LifeB. Jain Publishers, 1996
Singh, S.J.	History and Philosophy of Nature Cure
Dr. J. H. Kellogg, USA	Rational Hydrotherapy, National Institute of naturopathy, Pune.
John Harvey Kellogg	The Art of Massage, TEACH Services, Inc., 2010.
Pauline Wills	Colour Healing Manual: The Complete Colour Therapy Programme

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **IV SEMESTER**

#### **YSc BSc C 10: Patanjala Yoga Darshana-II**

**3 Credits, 42 Hrs**

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

- Understand the essence of Vibhutis and Kaivalya pada.
- Understand the practices of Yoga, chaturvyuhavada.
- Know the theory of Karma and principles of Karmaphala.

**Outcome:** The student shall be able to deal with;

- Understanding of concept of birth and death cycle according to Yoga.
- Knowledge of cause for birth and death cycle and way to liberation.
- Concept of Kaivalya and details of the practices oriented towards it.

#### **Unit - 1: Yoga Sadhanas in Yoga Darshana**

**[14 Hrs.]**

1. Concept of Kriya Yoga: Tapa, Swadhyaya, Ishwara Pranidhana, Theory of Kleshas: Avidya, Ashmita, Raga, Dewesh, Abhinivesh.
2. Concept of Chaturvyuhavada: Heya, Hetu, Hana, Hanopaya, Drishta and
3. Drisha-nirupanam: Prakriti and Purusha.
4. Concept of Viveka-khyati, Brief Introduction to Ashtanga Yoga.
5. Bahiranga Sadhana and their Siddhis.
6. Theory of Karmasya and principles of karmaphala.

#### **Unit - 2: Vibhutis in Yoga Darshana**

**[14 Hrs.]**

1. Introduction of Dharana, Dhyana and Samadhi, Samyama and its Siddhis.
2. Three types of Chitta Parinamah.
3. Brief introduction of Vibhuties and its importance in Yoga Sadhana.
4. Bhoota jaya, Indriya jaya and their Siddhis, Satvapurushanyatakhyati and its Siddhis.
5. Vivek Jnana Nirupanam, Kaivalya Nirvachana.

#### **Unit - 3: Concept of Kaivalya**

**[14 Hrs.]**

1. Five Types of Siddhis and Jatyantar Parinamh.
2. Concept of Nirman Chitta and four types of Karmas.
3. Concept of Vasana and concept of Bahya Pradartha (external element) and its abilities.
4. Non-self-illumination of Buddhi and its function, Dharmamegha Samadhi and infinite knowledge.
5. Mutation of Guna, Karma, Pratiprasavah and Kaivalya.

## BOOKS FOR REFERENCE

1. Swami Digambara Ji and others: Glossary of the Sankhyakarika, Kaivalyadhama, Lonavala, 2012.
2. Swami Virupaksananda: Sankhyakarika of I svarakrisna (with tattva Kamudia of Vachapati Mishra), Sri Ram Krishana Matha Madras, 1995.
3. James R. Ballantyne: The Sankhya Aphorisms of Kapila, Parimal Publications, New Delhi, 2004.
4. V.V. Sovani: A critical study of the Sankhya System, Chukhambha Sanskrit Pratisthan, New Delhi, 2005.
5. M.R. Yardi: The Yoga of Patanjali, Bhandarkar Oriental Research Institute, Poona, India, 1970.
6. K.D. Prithvipaul: The Yogasurta of Patanjali M.L.B.D. New Delhi.
7. Gaspar M. Koelmenn, S.J: Patanjali Yoga, Papal Athenaeum, Poona, 1970.
8. Swami Ved Bharti: Yogasutra of Patanjali (with the Exposition of Vyasa) M.L.B.D. New Delhi, 2004, Vol I & II.

Formative Assessment/ IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/Open Discussion	05
<b>Total</b>	<b>20</b>

## YSc BSc C 10P: Practicals – VII; 2 Credits; 52 Hrs

Study the meaning, procedure and benefits of following yogic practices with references and practice.

1. Svastikasana
2. Jalaneti
3. Kapalabhati
4. Vahnisara
5. Trataka
6. Vatayanasana
7. Virabhadrasana – III
8. Laghuvajrasana
9. Kapotasana

10. Pascimottanasana – III
11. Dvipadasirsasana
12. Karnapidasana
13. Yoganidrasana
14. Niralambasarvangasana
15. Urdhvakonasana
16. Ekapadahalasana
17. Pindasana
18. Sirsasana
19. Ujjayi Pranayama
20. Anuloma-Viloma pranayama
21. Pranava Meditation
22. Savasana 2

#### **Reference Books:**

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.

<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **IV SEMESTER**

**YSc BSc C 11: Applied Biochemistry**

**3 Credits, 42 Hrs.**

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

- Understand the concept of metabolism
- Have an understanding about the protein, carbohydrate, lipid metabolism.

**Outcome:** The paper is expected to make the students able to;

- Understand the biochemical reactions of metabolism.
- Understand modern diet & nutrition concept and their usage in daily life.
- Develop the skill of translating the concept of yogic diet into modern terminology.
- Develop the confidence of convincing public about the validity of Yogic diet.
- Advancement in interdisciplinary research studies in Yoga.

#### **Unit-1: Metabolism of carbohydrates and lipids**

**[14 Hrs.]**

1. Introduction to Metabolism: General features of metabolism, anabolism, catabolism, experimental approaches to study metabolism.
2. Carbohydrate Metabolism: Reaction and Energetic of glycolysis, Alcoholic & Lactic acid, Fermentation. Entry of Fructose, Galactose, Mannose etc. Reaction and energetic of TCA cycle. Gluconeogenesis. Glycogenesis and glycogenolysis Reactions and Physiological significance of Pentose phosphate pathway, Regulation of glycolysis, TCA cycle.
3. Electron Transport Chain and Oxidative Phosphorylation: Structure of Mitochondria, Sequence of electron carriers, site of ATP production, Inhibitors of electron transport chain. Hypothesis of mitochondrial oxidative phosphorylation (basic concepts). Inhibition and uncouplers of oxidative phosphorylation.
4. Lipid Metabolism: Introduction hydrolysis of triacylglycerol transport of fatty acids into mitochondria, oxidation of saturated fatty acids. ATP yield from fatty acid oxidation. Biosynthesis of saturated and unsaturated fatty acids.
5. Metabolism of ketone bodies, oxidation of unsaturated and odd chain fatty acids. Biosynthesis of triglycerides and important phospholipids, glycolipids, sphingolipids and cholesterol. Regulation of cholesterol metabolism.

**Unit-2: Amino acid & Nucleic acid Metabolism****[14 Hrs.]**

1. Amino Acids – General reactions of amino acid metabolism - Transamination, decarboxylation, oxidative & non-oxidative deamination of amino acids. Special metabolism of methionine, histidine, phenylalanine, tyrosine, tryptophan, lysine, valine, leucine, isoleucine and polyamines.
2. Urea Cycle: individual reactions, importance of urea cycle, hyperammonaemia, regulation of urea cycle, Interrelationship between urea cycle and TCA cycle.
3. Epinephrine and Nor-epinephrine: importance and biosynthesis from tyrosine, Histamine; biological importance and synthesis. PKU and AKU characteristic features, metabolic reasons.
4. Nucleic acid Metabolism: Biosynthesis of purine and pyrimidine nucleotides- sources of nitrogen and carbon atoms of purine and pyrimidine ring. Precursors of purine and pyrimidine biosynthesis. Conversion of nucleotides to deoxynucleotides.

**Unit-3: Basic immunology and molecular biology****[14 Hrs.]**

1. Immunology: Types and functions of T-cells and B-cells, mononuclear cells, mast cells, dendritic cells, antigen, antibody, Allergic reaction, Hypersensitivity, Autoimmunity.
2. Antigen-Antibody interactions: Agglutination, precipitation and opsonization, gel diffusion, ELISA, ELISPOT.
3. DNA Replication: Chromosomes, Mechanism of replication, synthesis of leading and lagging strand.
4. Mechanisms of Transcription: Eukaryotic transcription, promoters, enhancers, RNA polymerase I, II and III. Reverse transcription, splicing.
5. Translation: Ribosomes, structure, functional domain, tRNA, formation of initiation complex, chain elongation, translocation and termination. Protein biosynthesis, signals hypothesis.

**TEXT BOOKS**

1. Lehninger Principles of Biochemistry 5th Ed by David L. Nelson and Michael M. Cox, WH Freeman and Company.
2. Kuby Immunology, 9<sup>TH</sup> Edition, by Jenni Punt, Sharon Stranford, Patricia Jones, Judith A Owen

**REFERENCE BOOKS**

1. Textbook of Medical Biochemistry by MN Chatterjea and Rana Shinde, Jaypee Brothers.

2. Davidson's Principles and Practice of Medicine: A Textbook for Students and Doctors (Hardcover) 15th Ed by LSP Davidson, J MacLeod and CRW Edwards. Publisher: Churchill Livingstone.
3. Medical Biochemistry (Paperback) By John W. Baynes and Marek Dominiczak. Publisher: Mosby.
4. Review of Medical Physiology (Lange Basic Science) (Paperback) By William F. Ganong. Publisher: McGraw-Hill Medical

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/ Class Work / Assignment/ Open Discussion	05
<b>Total</b>	<b>20</b>

#### **YSc BSc C 11P: Practicals – VIII;**

**2 Credits; 52Hrs**

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

- Understand the principles and procedure of every experiment.
- Demonstrate an experiment with the interpretation of the results.
- Explain the procedure of each step of an experiment skilfully.

**Outcome:** The students are expected to develop;

- Skill to work in organizations like research centers and hospitals.
- Increased skill to carryout interdisciplinary research studies.
- To establish own Yoga Therapy centers with clinical setup.

#### **Unit-1: Clinical / applied physiology**

**[26 Hrs.]**

- 1.1 Introduction to Clinical examination.
- 1.2 Demonstration of electrocardiography, Electroencephalography.
- 1.3 Effects of exercise and posture on BP, HR.

**Unit-2: Clinical / Applied physiology****[26 Hrs.]**

2.2 Examination of higher function, Examination of cranial nerves.

2.3 Examination of motor system. Reflexes.

2.4 Examination of sensory system.

**PRACTICAL GUIDE**

1. Jain AK: Manual of Practical Physiology for BDS, Arya Publications.

<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	10
<b>Total</b>	<b>10</b>



## **BSc Yogic Science**

### **IV SEMESTER**

**YSc BSc C 12: Study of Hatharatnavali and Gorakshasamhita**

**5 Credits, 52 Hrs**

#### **Objectives:**

- To introduce different Hathayoga traditions to the students.
- To enrich the varieties of hathayogic techniques.
- To increase the skill of the candidate to train wide variety of people from different strata of socio-economic and physiological state.

**Outcomes:** By introducing Hatha Yoga & its texts, students shall be able to

- Understand about pre-requisites, principles about Hatha Yoga.
- Understand different Hatha Yoga Techniques of Classical texts.
- Understand the therapeutic application of Yogic Techniques.

#### **Unit- I Four Kinds of Yoga and Astakarmas in Hatharatnavali [13 Hrs.]**

1. Relationship between Hath Yoga and RajaYoga, Description of MahaYoga
2. Characteristics of Mantra Yoga, Laya Yoga, Raja Yoa and Hath Yoga.
3. Purificatory Techniques: Cakri, Nauli, Dhauti, Neti, Basti, Gajakarni, Trataka and Mastakabharanti, Purpose of Cleansing Techniques
4. Salient Features of Hathasiddhi, Conducive and Non-conducive Diet for Hatha Yoga.
5. Rules and Regulations to be followed in Hath Yoga, Components of Success and Failures in Hatha Yoga.

#### **Unit-II Asanas, Pranayamas, Mudras and Samadhi in Hatharatnavali [13 Hrs.]**

1. Description of Eighty-Four Asanas: Techniques and their Benefits, Classification of Niyama for the body and mind.
2. Pranayamas: Techniques, Benefits of Nine Pranayama- Bhastrika, Bhramari, Suryabhedana, Ujjai, Sheetali, Murchha, Seetkari, Kevala and Bhujangakarni, Levels of Pranayama Practitioners, Nadi Shodhana, Symptoms of Nadi Purification.

#### **Unit-III Asanas, Pranayamas, Mudras and Samadhi in Hatharatnavali [13 Hrs.]**

1. Relationship between mind and breath, Descriptions of Eight Types of Nadas (Sounds), Synonyms of Pingala and Ida.

2. Mudras: classification, benefits and methods of practice- Mahmudra, Mahabandha, Mahavedha, Uddiyan, Mulabandha, Jalandharbandha, Viparaitakarni, Vajroli, Shaktichalana and Khechari.
3. Description of Samadhi, Nadanusandhana, Four States of Yoga, Macrocosm and Microcosm, Manonmani avastha, Cakra and Nadis, Panchikarana.

**Unit-IV Hatha Yoga Practices in Goraksha Samhita (Goraksha Paddhati) [13 Hrs.]**

1. Concept and Result of Yoga, Description of Asanas: Techniques and their Benefits- Siddhasana and Kamalasana.
2. Cakras and their Petals, Kanda, Nadis, Panchaprana and Upapana: their Locations and Locations, Kundalini, Concept of Japa- ajapa, The Concept of Bindu (Shiva) and Rajas (Shakti).
3. Bandhas and Mudras: Techniques of Practice, their relevance in Hatha Yoga sadhana, Nature of Shakti.
4. Pranayama: Techniques and benefits, Nadishuddhi and Its Importance, Duration of Kumbhaka.
5. Pratyahara, Panchadharana, Meditation- Sakala and Nishkala, Samadhi and its Result.

**REFERENCE BOOKS**

1. Sawmi Vishnuswaroop: Goraksha Paddhati. Divine Yoga Institute, Kathmandu, Nepal
2. Gharote ML: Hatharatnavali, The Lonavala Yoga Institute, Lonavala, Pune, IInd Edition, 2009
3. Sadashivabrahmendra Saraswati(1978), ShivaYogadipika, Ananda Ashramagranthavali, Pune- 410403
4. Swami Niranjananda Saraswati, Gherandasamhita, Bihar School of Yoga, Munger, Bihar-811201
5. Swami Digambaraji(1997), Gheranda Samhita, SMYM Samiti, Kaivalyadhama, Lonavala-410403
6. Swami Vivekananda(1982), RajaYoga, Ramakrishna Ashrama Publications, Dehi Entally Road kolkata-700014.
7. Swami Digambaraji (1970), HathaYoga Pradipika of Swatmarama, Kaivalyadhama, Lonavala, Pune - 410403.
8. Swami Niranjanananda, Yoga Darshan, Sri Pachadashanam Paramahansa Alakh Bara, Deoghar-814113
9. Swami Adidevananda(1998), Patanjala Yoga Darshana – Vyasa Bahshya sahitha, Shri Ramakrishna Ashrama, Mysore – 570020.

10. Swami Niranjanananda(1997), HathaYogapradipika, Bihar School of Yoga-811201

11. Gharote M.L. & Pai, G.K. (Edi) Siddhasidhantpaddhati , Kaivalyadhama, Lonavla, 2005.

<b>Formative Assessment/ IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar/Class Work / Assignment/Open Discussion	05
<b>Total</b>	<b>20</b>

## **BSc Yogic Science**

### **IV SEMESTER**

#### **Elective Course - 2**

**YSc BSc E – 2: Fundamentals of Ayurveda;**

**2 Credits, 42hrs.**

#### **Objectives**

- To understand the basic principles and concepts of Ayurveda.
- To understand the role of Ayurveda in healthy lifestyle.
- To understand the role of Ayurveda in prevention and management of disease.
- To understand Relation between Yoga and Ayurveda.

#### **Outcome:**

- Ability to understand the psycho-physiological action and benefits of Yoga according to Indian medicinal system.
- Enhanced skill in Yoga Therapy in-terms of diagnosis and treatment.
- Better idea about proper lifestyle and food habits.

#### **UNIT I: General Introduction to Ayurveda**

**[10 Hrs.]**

1. General introduction to Ayurveda
2. Definition, aim of Ayurveda, its origin, history and propagation.
3. Basic introduction to main Ayurvedic texts like Charaka Samhita, Sushruta Samhita and Ashtanga Samghra.
4. Ashtanga Ayurveda and its significance.
5. Concept of Health and Disease according to Ayurveda and its utility in health promotion and disease management.

#### **UNIT II: Swasthavritta, Dinacharya, Ritucharya, Ratricharya, Sadvritta and Achararasayana**

**[10 Hrs.]**

1. Basic principles of Ayurveda – Tridosha, Saptadhatu, Trimala, Pancha Mahabhuta, Prakruti & Manas.
2. Concept and importance of Swasthavritta, Dinacharya, Ritucharya
3. Concept of Sadvritta and Achara rasayana.
4. Concept of Agni, Srotas and Ama, Concept of Dharniya and Adharniya vega in Ayurveda.
5. Introduction to Dravya, Guna, Karma, Virya, Vipaka and Prabhava.

**UNIT III: Upasthambas with Special Emphasis on Ahara****[10 Hrs.]**

1. Concept of diet and Upasthambha.
2. Concept of ahara, ahara pachana, Pathya & Apathya in Ayurveda
3. Introduction to Sharira poshana (nourishment)
4. Concept of Oja in Ayurveda
5. Role of Ayurvedic diet in health and disease

**UNIT IV: Introduction to Panchakarma and other Methods of Ayurvedic Treatment****[12 Hrs.]**

1. Introduction of Panchakarma and other modes of treatment in Ayurveda.
2. Role of Poorva and Paschat karma in Panchakarma
3. Significance of Panchakarma in Ayurveda and Shatkarma in Yoga.
4. Approach of Ayurveda and Yoga as whole.
5. Relationship of Ayurveda and Yoga.

**Books for References**

- Frawley, David : Yoga and Ayurveda: Self-Healing, MLBD, New Delhi, 2000.
- Sharma, R. & Dash, B. : Charak Samhita, Chowkhamba Sanskrit Series Office, Varanasi, 1988.
- Dr. Rakhee Mehra : Ayurveda Eka Parichaya, MDNIY, New Delhi.
- Frawley, David : Ayurvedic treatment for common diseases, Delhi Diary, Delhi, 1974.
- Singh, Ramharsh : Swasthvritta Vijyana, Chowkhamba Sanskrit Prakashan, 2001.
- Frawley, David : Ayurveda and the Mind, MLBD, New Delhi, 2004.
- Mishra, S.P. : Yoga and Ayurveda, Chaukhamba Prakashan, Varanasi, 1989.

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **IV SEMESTER**

**YSc BSc C – 1 Compulsory Course: Fundamentals of Counselling; 2 Credits, 42hrs.**

#### **Objectives and outcome:**

- To develop a general understanding towards abnormal behaviour and disease process through various models of health psychology
- To understand causes of pathological behaviour and psych-diagnostic assessment.
- To develop skill for diagnosis and classification of mental disorders.

#### **Unit-1: Counselling Skills**

**[21 Hrs.]**

1. Rapport Establishing Skills
2. Relationship Skills
3. Conversational Skills
4. Mind Skills – Perception, Self-talk, Visual Images, Explanation, Decision Making
5. Managing Resistance Skills
6. Skills for understanding body movements (Body Language)
7. Listening Skills
8. Feedback Skills
9. Empathy Skills
10. Conflict Resolving Skills
11. Problem Solving Skills
12. Oral Persuasion Skills
13. Skills for understanding and managing feelings of the client

#### **Unit-2: Counselling Techniques**

**[21 Hrs.]**

1. Behaviour Modification Techniques - Skinner
2. Conditioned Reflex Therapy – Pavlov
3. Gestalt Therapy
4. Family Therapy
5. Couple Therapy
6. Rational Emotive Behaviour Therapy
7. Transactional Analysis
8. Assertive Training
9. Dream Interpretation
10. Anger Management
11. Neuro-linguistic Programme

## 12. Art of Positive Thinking

### TEXT BOOKS

1. Hersen, M., Kazdin, A. E., & Bellack, A. S. (1991) The Clinical Psychology Handbook Pergamon. New York

### REFERENCE BOOKS:

1. Sweet, J. J., Rozensky, A. & Tavian, S. M. (1991) Handbook of Clinical Psychology in Clinical.
2. Practice. New York: Plenum.
3. Walker, C. E. (2001) Handbook of Child Clinical Psychology. New York: John Wiley & Sons.

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	10
<b>Total</b>	<b>10</b>

## BSc Yogic Science

### V SEMESTER

**YSc BSc C 13: Yoga System and its practice in Shiva Samhita**      **3 Credits, 42hrs.**

**Unit I Introduction to Siva Samhita**

**14 Hrs**

1. Introduction, The Layayoga, Karma kanda, Jnana Kanda
2. Yoga and Maya, Paramahansa, Evolution, Involution, Karma.
3. Knowledge of the Tattvas, Microcosm, Nerves, nerve centers.
4. Jivatma

**Unit II Yoga System and its Practise**

**14 Hrs**

1. The vayus, The Guru, The Adhikari, Place etc
2. The pranayama, the means, the first, second and third stages,
3. Vayusiddhi, siddhis, ghata, paricaya and nispatti avastha. The asanas
4. Mudras: yoni mudra, awakening of kundalini, the nine mudras.

**Unit III The Rajayoga**

**14 Hrs**

1. Bhoga, dharma, jnana, four kinds of yogas.
2. Sadakas – classification, pratikopasana.
3. Rajayoga, various kinds of dharana.
4. The six cakras, sahasrara, the Rajadhiraja Yoga.

**Reference Books:**

1. The Siva Samhita, Translated by Rai Bahadur Srisa Chandra Vasu, Chaukhamba Sanskrit Pratishthan, 38 U A Bungalow Road, Jawahar Nagar, PB No 2113, Delhi – 110007.
2. Siva Samhita (A Critical Edition – English Version), Swami Maheshananda and Others, Kaivalyadhama SMYM Samiti, Swami Kuvalayananda Marg, Lonavala – 410403. Maharashtra, India.

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar / Class Work / Assignment / Open Discussion	05
<b>Total</b>	<b>20</b>



## **BSc Yogic Science**

### **V SEMESTER**

#### **YSc BSc C 14: Fundamentals of Psychology;**

**3 Credits, 42hrs.**

##### **Objectives:**

- To introduce modern psychology to Yoga students.
- Make the students able to understand psychological aspects.
- To bring about a comparative mode of study between ancient and modern psychology.

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

- Understand the necessity and significance of psychology.
- Have an understanding about utility of psychology in the society.
- Understand human behavior with regard to therapy.

#### **UNIT- I: Human Psyche, Psychology – A Science of Behaviour**

**[10 Hrs.]**

1. Psychology: Definition of Psychology; Psychology as a Science of Behaviour; Scope and Utility of Psychology
2. Concept of Human Psyche; Sigmund Freud's Model of Human Psyche; Human Psyche and Behaviour
3. Definition of Behaviour and its Cognitive, Conative and Affective Aspects; Behaviour and Consciousness; States of Consciousness
4. Methods of Psychology: Introspection, Observation, Experimental Method, Interview, Psychological Testing
5. Physiological Basis of Behaviour: Central Nervous System and Autonomic Nervous System.

#### **UNIT- II: Domains and Dynamic of Behaviour**

**[12 Hrs.]**

1. Attention: Nature, Determinants of Attention; Perception: Nature; Gestalt theory of Perception.
2. Learning: Nature; Theories: Learning by Trial and Error, Learning by Insight, Classical and Instrumental Conditioning.
3. Intelligence: Nature; Emotional Intelligence (EI): Nature, Goleman's Model of EI; Spiritual Intelligence: Nature.
4. Emotion: Nature; Physiological Basis of Emotion; Theories: James-Lange Theory, Cannon-Bard Theory.
5. Motivation: Nature; Types of Motives: Biological Motives, Social and Psychological Motives; Maslow's Theory of Motivation.

### **UNIT- III: Personality and Its Development**

**[10 Hrs.]**

1. Personality: Nature and Types of Personality; Yogic View of Personality.
2. Personality Development: Various Facets (Domains) and Stages of Personality Development; Determinants of Personality: Heredity and Environment.
3. Theories of Personality of Sigmund Freud, Alfred Adler and C.G. Jung, Carl Rogers.
4. Assessment of Personality: Personality Inventories, Projective Techniques, Case History Method.
5. Yoga and Personality Development: Yogic Attitudes; Personality Development with special emphasis on *Panchakosha* and *Ashtanga Yoga*.

### **UNIT-IV: Stress & Its Management, Mental Health and Yoga**

**[10 Hrs.]**

1. Mental Health: Meaning and Importance; Indicators of Mental Health; Criteria of Normal and Abnormal Behaviour
2. Stress: Nature; Symptoms, Causes and Consequences of Stress; Stress and Mental Health; Yogic Perspective of Stress
3. Adjustment: Nature; Adjustment and Stress; Conflict and Frustration; Ways of Adjustment: Direct Ways and Indirect Ways (Defence-mechanisms)
4. Yogic Perspective of Mental Health; Promoting Mental Health, Impact of Yogic Life-style on Mental Health

### **REFERENCE BOOKS:**

1. Basavaraddi, I.V. (Managing Editor) (2010). *Yoga: Teacher's Manual for School Teachers*. New Delhi: Morarji Desai National Institute of Yoga.
2. Bhatia, Hans Raj (2005). *General Psychology*. New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
3. Herrman, H., Saxena, S, & Moodie, R. (ed.) (2005). *Promoting Mental Health*. Switzerland: WHO Press, World Health Organization.
4. Hilgard, Ernest R., Atkinson, Richard C. & Atkinson, R.L. (1976). *Introduction to Psychology*. New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
5. Morgan, C. T., King, R.A., Weisz J. R. & Schopler J. (2006). *Introduction to Psychology*. New Delhi: Tata McGraw Hill Publishing Co. Ltd.
6. Nagendra, H. R. (1988). *New Perspectives in Stress Management*. Bangalore: Vivekananda Kendra.
7. Singh, A. K. (2007). *Saral Samanya Manovijnana*. Delhi: Motilal Banarasidas Publications.
8. Srivastava, D.N. (2007). *General Psychology*. Agra: Vinod Pustak Mandir.
9. Taylor, S. E. (2006). *Health Psychology* (6th ed.). New Delhi: Tata McGraw Hill.

10. Udupa, K.N. (2007). Stress and Its Management by Yoga. Delhi: Motilal Banarasidas.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	15
Seminar / Class Work / Assignment / Open Discussion	05
<b>Total</b>	<b>20</b>

## V SEMESTER Practicals - I

**YSc BSc C 13, 14 P: Practicals - IX;**

**2 Credits, 52hrs.**

### **Objectives:**

Objectives of this course is to make the students familiar about the tests and the scales and the procedure of administering them.

Division/Distracton of Attention

1. Emotional Intelligence/ Emotional Maturity
2. Spiritual Intelligence/ Study of Values/ Spiritual Belief
3. Self-concept
4. *Asakti/ Anasakti* Scale
5. Anxiety Scale
6. Aggression Scale
7. Fear of Death
8. Depression
9. Frustration
10. Personality Inventory
11. Adjustment/ Mental Health
12. General Well-being
13. Case study

**Note: Students are to conduct and report at least eight (8) practicals. The examiner will allot one practical at the time of examination.**



<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **V SEMESTER**

#### **YSc BSc C 15: Yogopanishads and Siddhasiddhantapaddhati**

**3 Credits, 42hrs.**

##### **Learning Objectives:**

Following the completion of this course, student will be able to

- Have an idea about the major Yogopanishads.
- Understand the essence of each Upanishad and how to put them into practice.
- Understand each Upanishad and the role of it in our day-to-day life.
- To introduce Gorakshanatha tradition of Hathayoga.

**Learning outcome:** The paper is expected to bring about;

- Ability to understand the essence of Yoga in Upanishads.
- Comprehensive knowledge of aupanishadic yoga and co-relate with other schools of Yoga.
- In-depth clarity towards the aim and objectives of Yoga Darshana.
- Knowledge of many Hathayoga traditions.

##### **Unit - 1: Shandilya Upanishad and Jabaladarshanopanishad**

**14Hrs**

1. Brief Introduction of Shandilya Upanishad, Ashtanga Yoga: Types of Yama, Niyama, Asana, Concept of Nadi & Prana, Stages of Pranayama, Concept & Types of Pratyahara, Dharana, Dhyana. And Samadhi.
2. Brief Introduction to Jabaladarshanopanishad, Ashtanga Yoga: Yama (10 Types), Niyama (10 Types), Asana (9 Types), Types of Prana & Nadi, Types of Pranayama, Pratyahara, Dharana, Dhyana (Its Types) & Samadhi.

##### **Unit - 2: Trishikhibrahmanopanishad and Yogchudamanyupanishad**

**14 Hrs**

1. Brief Introduction to Trishikhibrahmanopanishad, Concept & Types of *Yamas* and *Niyamas*, Concept & Types of *Asanas*, Types of *Nadi*, Types of *Prana* & *Pranayama*, Concept of *Pratyahara*, *Dharana*, *Dhyana*, *Samadhi*.
2. Brief Introduction of Yogchudamanyupanishad, *Shadanga Yoga*- *Asana*, *Chakra*, *Nadi*, *Prana*, *Pranayama*, Concept of *Kundalini*, *Mitahara*, *Mudra* & *Bandhas*, Concept of *Pratyayahara*, *Dharana*, *Dhyana*, and *Samadhi*.

##### **Unit - 3: Hathayoga Practices in Siddhasiddhantapaddhati**

**14Hrs**

1. Concept of anama and pinda, formation of garbhapinda.
2. Navachakra and Shadadhara

3. Concept of Pindadhara
4. Concept of Avadhuta, Nature of Avadhuta, Avadhutayogilakshana

#### REFERENCE BOOKS

1. The Principal Upanisads, Radhakrishnan, S Harpercollins India, 2006
2. Ishadi nau Upanishad, Gita press Gorakhpur
3. Nine Principal Upanisads, Saraswti, Swami Satyanand Yoga Publication Trust Bihar, 2004.
4. Upanishads, Swami Ranganathananda Bharatiya Vidya Bhavan, Bombay, 1985
5. 108 Upanishad - (Sadhana Khand, Brahmaavidya Khand, Jnana Khand) Sharma, Pt. Sriram Acharya, Shantikunj, Haridwar.
6. The Essence of Principal Upanishads, Sivananda, Swami, Divine Life Society, 1980
7. The Philosophy of the Upanishds, Chari, S.M. Srinivasa Munshiram Manoharlal, Delhi, 2002.
8. Upanishad Sangraha - Jagdish Shashtri, Motilal Banarasidas, Varanasi, Delhi, Chennai.
9. Gharote M. L. & Pai, G.K. (Edi) Siddhasidhantpaddhati, Kaivalyadhama, Lonavla, 2005.

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar / Class Work / Assignment / Open Discussion	05
<b>Total</b>	<b>20</b>

## **BSc Yogic Science**

### **V SEMESTER**

#### **YSc BSc C 16: Four Streams of Yoga;**

**3 Credits, 42hrs.**

##### **Learning objective:**

- To introduce prominent and one of the fundamental yoga texts.
- To impart in-depth knowledge of four schools of yoga.
- To introduce the essence of Yogic concept in Indian philosophy.

**Expected outcome:** Following the completion of this course, students shall be able to

- Understand the four paths/streams of Yoga with in depth understanding.
- Have an in depth understanding about their similarities and dissimilarities.
- Understand the principle and conceptualize each stream.

##### **Unit-I: Karma Yoga**

**[10 Hrs.]**

1. The concept and meaning of karma Yoga according to Bhagavadgita
2. Types of Karma according to Bhagavadgita.
3. Concept of Sthita Prajna according to Bhagavadgita.
4. Characteristics and Stages of Sthita Prajna according to Bhagavadgita.

##### **Unit-II: Jnana Yoga**

**[12 Hrs.]**

1. The concept and meaning of Jnana Yoga according to Bhagavadgita (Shankara Bhashya).
2. Concept of Samkhya (Atma, Purusha and Jivatma) according to Bhagavadgita.
3. Sadhana Chatustaya, Stages of Jnana Yoga practice (Shravana, Manana, Nidhidhyasana)
4. Qualities of Jnani.

##### **Unit-III: Bhakti Yoga**

**[10 Hrs.]**

1. The concept and meaning of Bhakti Yoga according to Bhagavadgita (Shree Bhashya).
2. Concept of Bhakti, Shraddha, according to Bhagavadgita and Narada Bhakti Sura.
3. Concept of Paramatma (Parmeshwar or Purushottam) according to Bhagavadgita.
4. Navavidha Bhakti, Qualities of Bhakta according to Bhagavadgita.

##### **Unit-IV: Dhyana Yoga**

**[10 Hrs.]**

1. Definitions of Yoga and the concept of Yoga Sadhana (Dhyana Yoga (Asana, Pranayama, Pratyahara, Dhyana) according to Bhagavadgita
2. Concept of Triguna and its role in Yoga Sadhana according to Bhagavadgita

3. Concept of Ahara and its role in Yoga Sadhana according to Bhagavadgita
4. Qualities of Yogi according to Bhagavadgita

#### **BOOKS FOR REFERENCE**

1. Swami Gambhiranand; Bhagavadgita (with Gudharth Dipika) Sri Ramkrishna Matha Madras
2. Swami Gambhiranand; Bhagvatgita with the commentary of Sankaracharya, Advaita Ashrama, Kolkata, 2003
3. Shri Bhashya (Shri Ramanujacharya), Shrimadbhagavadgita, Gita press gorakhpur.
4. Swami Adidevananda: Sri Ramanuja Gita Bhashya, Sri Ramakrishna Math Madras-04
5. Radhakrishnan, S.: The Bhagavad-Gita, Harpercollins India, 2011.
6. Swami Rama- Perennial Psychology Bhagvat gita (HI, USA, 1996)
7. Swami Shrikantananda; Gita Darshana, Indian Institute of Human Excellence Hyderabad
8. Swami Bhuteshananda: Narayana Bhakti Sutra, Advaita Ashrama Publication-Dept. Kolkata, II Edition, 2009
9. Swami Vivekananda: Jnana Yoga, Bhakti Yoga, Karma Yoga, Raja Yoga. Advaita Ashrama, Calcutta, 2000
10. Swami Abhidananda Bhagvatgita, the divine message, Ramakrishna Vedanta Matha, Kolkata, 1990
11. Swami Raghvenderananda; Universal message of the Bhagvatgita, Advaita Ashrama, Kolkata, 2000
12. The Bhagavad-Gita (for daily living), Easwaran, Eknath, JAICO publishing Mumbai, 2003
13. The Philosophy of the Bhagavadgita, Chari, S.M. Srinivasa Munshiram Manoharlal, Delhi, 2005.

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar / Class Work / Assignment / Open Discussion	05
<b>Total</b>	<b>20</b>

#### **V SEMESTER Practicals - II**

**YSc BSc C 15, 16P: Practicals – X;**

**2 credits, 52hrs.**

Study the meaning, procedure and benefits of following yogic practices with references and practice.



1. Padmasana
2. Bhujapidasana
3. Gomukhasana
4. Parvatasana
5. Ardhashakrasana
6. Parighasana
7. Garbhapindasana
8. Kraunchasana
9. Mayurasana
10. Nakrasana
11. Matsyendrasana
12. Marjalarana 1
13. Marjalarana 2
14. Urdhhabaddhakonasana
15. Urdhvaparsvakonasana
16. Parsvahalasana
17. Setubandhasarvangasana
18. Ujjayi Pranayama
19. Anuloma-Viloma pranayama
20. Pranava Meditation
21. Savasana II

**Reference Books:**

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.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Practical + Record	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **V SEMESTER**

**YSc BSc C 17: Concept of food, Svava Yoga and Yoga Rahasya; 3 Credits, 42hrs.**

#### **Learning Objectives:**

To acquaint the student in fundamentals of

- Dietetics and nutrition.
- Svava yoga and Yoga Rahasya.
- Concept of health of yogic science.

#### **Learning Outcome:**

- Application of diet in yogic lifestyle.
- Health concept in the selected traditional texts.
- Application of yoga in improving health.

#### **I Fundamentals of Dietetics and Nutrition – Modern Concept 14Hrs**

- 1) Nutrition, Nutrients – Macro and Micro nutrients Carbohydrates – Monosaccharides, Disaccharides, Polysaccharides
- 2) Proteins – Importance of proteins in diet, Essential and non-essential amino acids, Lipids – essential fatty acids, Lipid profile.
- 3) Vitamins – Fat soluble and Water-soluble vitamins – Physiological role, deficiency signs, sources, requirement.
- 4) Minerals – Calcium, Iron and other trace elements in nutrition. Balanced diet, Energy requirement.

#### **II Ancient Concept of Food 14Hrs.**

- 1) Food and Triguna
- 2) Food and Tridosha
- 3) Yogic Diet – Pathya and Apathya
- 4) Sadrasa, Pancamahabhuta and Food.

#### **III Svava Yoga and Yoga Rahasya 14Hrs**

- 1) Svava yoga in brief, Sound and Form of Svava
- 2) Tattva Vichara, Svava Yoga Practice
- 3) Yoga Rahasya-practicing method of asana, Pranayama, meditation etc.
- 4) Special indications of yoga practice to cure the diseases.

## Reference Books:

1. Satyanarayana U. (2008). Essentials of Biochemistry (2 ed.). Delhi: Books & Allied Ltd. New Delhi - 110 002.
2. H.R. Nagendra. (2004). Yoga Its Basis and Applications. Bangalore: Swami Vivekananda Yoga Prakashana19, Bagappa Rd, Gavipuram Extention, Kempegowda Nagar, Bengaluru, Karnataka 560019.
3. Krishna Bhat, K. (2006). The Power of Yoga (1 ed.). Mangalore: Suyoga Publication Mangalore-574279.
4. Muktibodhananda Swami. (1999). *Swara Yoga*. Munger: Bihar School of Yoga Bihar, Bihar 811201 India.
5. Radhakrishnan, P. (1995). *The Bhagavadgita*. New York: Aquarian, NY 10022, United States.
6. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.). Lonavala:Kaivalyadhama Lonavla, Maharashtra 410403.
7. Swami Digambarji, & M L Gharote. (1997). *Gheranda Samhita*. Lonavla: Kaivalyadhama Lonavla, Maharashtra 410403.
8. TKV. Desikacharya. (1998). *Nathamuni's Yoga Rahasya*. Chennai: Krishnamacharya Yoga Mandiram, Chennai, Tamil Nadu 600028.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	15
Seminar / Class Work / Assignment / Open Discussion	05
<b>Total</b>	<b>20</b>

## **BSc Yogic Science**

### **V SEMESTER**

#### **YSc BSc C 18: Yoga and Health;**

**3 Credits, 42hrs.**

##### **Objectives:**

- To understand the concept of body and health from the perspective of Yoga.
- To have an understanding of the Yogic concept of Disease and the remedial measures therein.

##### **Outcomes:**

- Ability to understand the cause, symptoms, nature and healing methods of diseases according to Yoga.
- Knowledge of disease diagnosis process as a therapist.
- Information of proper lifestyle and habits for healthy living and ability to apply those as a therapist.

#### **Unit-1: Yogic concepts of health and disease**

**[14 Hrs.]**

1. Health and Disease: Meaning and definitions, Concept of Adhi and Vyadhi, Yogic concept of Health and Disease, Yoga as a preventive Health care – Heyamduhkhamanagatam.
2. Potential causes of ill-health: Tapatrayas and Kleshas, Physical and Physiological manifestation of Disease: Vyadhi, Alasya, Duhkha, Angamejayatva and Svasa-prashvasa. Mental and Emotional ill Health: Styana, Samshaya, Pramada, Avirati, Duhkha, Daurmanasya, Bhranti-darsana, Alabdha-bhumikatva and Anavastitatva.
3. Shuddhi Parikriyas in Yoga and their role in preventive and curative Health, Karma Shuddhi, (Yama, Niyama), Ghata Shuddhi (Shat-karma), Snayu Shuddhi (Asana), Prana Shuddhi (Pranayama), Indriya and Mano Shuddhi (Pratyahara), Chitta (Mano, Buddhi & Ahamkar) Shuddhi (Dharana, Dhyana and Samadhi).
4. Concepts of Trigunas, Pancha-koshas, Pancha-mahabhutas, Pancha-prana and Shat-chakra and their role in Health and Healing.
5. Concept of Swara Yoga and its efficacy in Health and Healing.

#### **Unit-2: Yogic principles and practices of healthy living**

**[14 Hrs.]**

1. Yogic Principles of Healthy Living: Aahara, Vihara, Aachara and Vichara;
2. Role of Yogic Positive Attitudes (Maitri, Karuna, Mudita and Upeksha) for Healthy Living, Concept of Bhavas and Bhavanas with its relevance in Health and well-being;

3. Yogic principles of Lifestyle management and its role in prevention of disease and health promotion;
4. Yogic Principles of Diet and its role in Healthy living;
5. Yogic Practices of Healthy living: i.e., Yama, Niyama, Shat-karma, Asana, Mudra & Bandha Pranayama, Pratyahara, Dharna and Dhyana, and their role in Healthy living.

### **Unit-3: Health benefits of Yogic practices**

**[14 Hrs.]**

1. Health benefits of asana.
2. Health benefits of Pranayama.
3. Health benefits of Shatkarma.
4. Health benefits of Bandha and Mudra.
5. Health benefits of Meditation.

### **BOOKS FOR REFERENCE**

1. Preeti Goel and Rita Jain: Spectrum of Health (Sports Publications, New Delhi, 2003)
2. M. M. Gore: Anatomy and Physiology of Yogic Practices (New Age Books, New Delhi, 2008)
3. Dr. K. Krishna Bhat: The power of Yoga
4. Dr. R. S. Bhogal : Yoga Psychology, Kaivalyadhama Publication
5. Dr. Manmath M Gharote, Dr. Vijay Kant: Therapeutic reference in Traditional Yoga texts
6. T.S. Rukmani: Patanajala Yoga Sutra
7. Sahay, G. S.: Hatha Yoga Pradeepika, MDNIY Publication, 2013
8. Kdham: Gheranda Samhita, Kaivalyadhama, Lonavla,

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar / Class Work / Assignment / Open Discussion	05
<b>Total</b>	<b>20</b>

## V SEMESTER Practicals - III

**YSc BSc C 17, 18P: Practicals – XI;**

**2 credits, 52hrs.**

Study the meaning, procedure and benefits of following yogic practices with references and practice.

1. Padmasana
2. Vasisthasana
3. Visvamisrasana
4. Kasyapasana
5. Vrschikasana
6. Bakasana
7. Ekapadarajakapotasana
8. Buddhasana
9. Kapilasana
10. Bhairavasana
11. Cakorasana
12. Skandasana
13. Durvasasana
14. Rcikasana
15. Trivikramasana
16. Ekapadabakasana 1
17. Ekapadabakasana 2
18. Ujjayi Pranayama
19. Anuloma-viloma pranayama
20. Pranava Meditation
21. 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.

<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **V SEMESTER**

#### **YSc BSc C – 2, Compulsory Course: Introduction to Common Ailments;**

**2 Credits, 42hrs.**

##### **Objectives:**

- To be able to understand the common ailments and its causes, pathophysiology, clinical features, diagnosis and managements.
- To give advanced information

##### **Unit-1: Musculo-Skeletal Disorders**

**[08Hrs]**

Introduction to Musculo-Skeletal Disorders: Meaning, Definition, Causes, Pathophysiology, Classification, Clinical Features, Diagnosis and Management of following conditions:

1. Back Pain: Lumbar Spondylosis, Intervertebral disc prolapse (IVDP) with Sciatica, Spondylitis.
2. Neck pain: Cervical Spondylosis.
3. Arthritis: Osteoarthritis, Rheumatoid Arthritis, Gout.
4. Fibromyalgia and Postural deformities such as Kyphosis, Scoliosis & Lordosis.

##### **Unit-2: Cardio-Respiratory disorders**

**[09 Hrs.]**

Introduction to Cardio-Respiratory Disorders: Meaning, Definition, Causes, Pathophysiology, Classification, Clinical Features, Diagnosis and Management of following conditions:

1. Bronchial Asthma & Chronic Bronchitis.
2. Sinusitis, Common cold, Allergic Rhinitis & Sleep apnoea.
3. Hypertension, Atherosclerosis / Coronary artery disease.
4. Ischemic Heart disease –Myocardial Infarction.

##### **Unit-3: Gastrointestinal-Metabolic and Excretory Disorders**

**[09 Hrs.]**

Introduction to Gastrointestinal-Metabolic and Excretory disorder: Meaning, Definition, Causes, Pathophysiology, Classification, Clinical Features, Diagnosis and Management of following conditions:

1. Dyspepsia, Hyperacidity and Peptic Ulcers.
2. Constipation and Irritable Bowel Syndrome.
3. Thyroid Disorders and Obesity.
4. Diabetes Mellitus



#### **Unit-4: Obstetric & Gynaecological Disorders**

**[08 Hrs]**

Introduction to Obstetric & Gynaecological Disorders: Meaning, Definition, Causes, Pathophysiology, Classification, Clinical Features, Diagnosis and Management of following conditions:

- 4.1. Menstrual Disorder (dysmenorrhea, pre-menstrual syndrome): Menstrual pain, cramp etc.
- 4.2. Polycystic Ovarian Syndrome (PCOS/ *PCOD*)
- 4.3. Menopausal discomfort (anxiety, irritability, insomnia, hot flashes)

#### **Unit-5: Neurological and Psychological Disorders**

**[08 Hrs.]**

Introduction to Neurological and Psychological Disorders: Meaning, Definition, Causes, Pathophysiology, Classification, Clinical Features, Diagnosis and Management of following conditions:

1. Migraine & Headache
2. Depression & Stress.
3. Insomnia, Dementia & Attention Deficit Hyperactivity Disorders (ADHD).

#### **TEXT BOOKS**

1. Dr Robin Monroe, Dr R Nagarathna and Dr H R Nagendra, Yoga for common ailments, Gaia Publishers.
2. Nagarathna R and Nagendra HR, Yoga therapy for common ailments series, SVYP publications, 2010
3. Swami Karmananda, Yoga therapy for common diseases, Yoga publication trust, Munger, 2001

#### **REFERENCE BOOKS**

1. A.K. Das (Ed.): Medicine Update. Bombay: Association of Physicians of India, 1998.
2. Aatreya, Shanti Parkash: Yoga Manovigyan, Indian Psychology, International Standard Publication, Varanasi; 1965
3. Bhavanani, A. B. (2006). Correction of Breathing Disorders through Rishiculture Ashtanga Yoga. Pondicherry, India: Dhivyananda Creations.
4. Bhavanani, A. B. (2008). Yoga for Health and Healing. Pondicherry, India: Dhivyananda Creations.
5. Bhavanani, A. B. (2008). Yoga for Health and Healing. Pondicherry, India: Dhivyananda Creations.
6. Dr Robin Monroe, Dr R Nagarathna and Dr H R Nagendra, Yoga for common ailments, Gaia Publishers
7. Harrison: Principles of Internal Medicine, International Edition, 14th Edition, New York: McGraw Hill Co. Inc., 1998.

8. Khalsa, S.B., Cohen, L., McCall, T., & Telles, S (Ed.), The Principles and Practice of Yoga in Health Care (pp.17-29). East Lothian, UK: Handspring.
9. MDNIY publications:10 Booklets, Yoga Therapy Series, MDNIY Publications, New Delhi, 2009
10. Nagarathna R and Nagendra H R: Yoga for Arthritis, Back pain, Diabetes, Pregnancy Breathing Practices, Swami Vivekananda Yoga Prakasana, Bangalore, 2000
11. Nagarathna, R and Nagendra, H.R.: Integrated Approach of Yoga Therapy for Positive Health, Swami V4ekananda Yoga Prakashana, Bangalore, 2001
12. Shivananda Saraswati: Yoga Therapy (Hindi & English)
13. Swami Kuvalayananda and S.L. Vanikar: Yoga Therapy: Kaivalyadhama, Lonavala, Revised Edition
14. Swami Satyananda Saraswati: Yoga and Cardio Vascular Management, Yoga Publication Trust, Munger, 2005

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **VI SEMESTER**

#### **YSc BSc C 19: Impact of Yogic Practices on Human Body**

**3 Credits, 42hrs.**

##### **Objectives:**

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

- To throw light on anatomy so that student can experience the involvement of their body parts while practicing various postures of Yoga

##### **Outcome:**

- Ability to compare and study the effect of Yoga on psycho-physiological status.

#### **Unit - 1: Impacts of Yogic practices on the maintenance of milieu environment**

1. Physiology of exercise. Types of exercise and its relation with Yoga.
2. Impacts of Yoga on control system regulation.
3. Neuro - endocrine mechanism of impacts of yogic practice on human body.
4. Role of yogic practice on the maintenance of homeostasis and internal environment
5. Psycho-physiological and environmental factors of Yama and Niyama to get optimum health impacts.

#### **Unit - 2: ASANA, PRANAYAMA AND MEDITATION**

1. Mechanism of influence of six types of asanas: stretching; pivoting; strengthening; inverted; pressing; equilibration, Reciprocal inhibition and innervation.
2. Effects of different types of asana on musculo skeletal system, cardio cardiovascular system, respiratory system and major organs of the body.
3. Psycho-physiological effects of pranayama; physiological mechanisms involved in higher levels of adaptation through pranayama.
4. Different types of meditation its impacts on central nervous system and peripheral nervous system. Different types of meditation its impacts on cardiovascular system, respiratory system, and nerve – muscle physiology.
5. Meditation its impacts on relaxation of each and every system its correlation with HPA Axis.

#### **Unit - 3: WARM UP EXERCISE, KRIYAS, MUDRA AND BANDHAS**

1. Warm up exercise and its importance to preparedness of yogic practice. Different warm-up exercise and its physiological importance.

2. Significance of salt during the practice of Kriya; Tonicity of a solution.
3. Effect of kriyas on major organs of Human body.
4. Principles behind practice of Mudras. Effects of Mudra on parts of Human body.
5. Principles behind practice of bandhas. Effects of bandhas on parts of human body

### **TEXT BOOKS**

- Gore MM: Anatomy and Physiology of Yogic Practice, New Age Books, New Delhi.
- Sri Krishna: Notes on Structure and Functions of Human Body and Effects of Yogic Practice on it. I.C.H.Y.C., Kaivalyadhama.
- H. David Coulter: Anatomy of Hatha Yoga, A manual for students, teachers and practioners., Motilal Banarsidass Publishers Private limited, Delhi.
- A Handbook for Yogasana Teachers: The Incorporation of Neuroscience, Physiology, and Anatomy by Mel Robin, Publisher: Wheatmark; 1 edition (15 May 2009)

### **REFERENCE BOOKS**

- Guyton and Hall: Text book of Medical Physiology
- Chaurasia, BD: Human Anatomy
- Jain AK: Text Book of Physiology (Volume I and II), Avichal publishing company
- Sembulingam K; Sembulingam P: Essentials of Physiology for Dental students.
- Bijlani R. L.: Understanding of Human Physiology, Jaypee Brothers Medical Publishers Pvt. Ltd, New Delhi, 2011
- Pal G. K & others: Textbook for practical Physiology, Orient Longman Pvt. Ltd, Hyderabad, 2007
- Jayaprakash, C.S: Sports Medicine, Jaypee brothers, New Delhi.
- Balkrishna Acharya: Yoga – Vijnanam, Divya Publication, Haridwar.
- McArdle William D, Katch I Frank, Katch Victor L. Essentials of exercise physiology. Lippincott Williams & Wilkins.
- Brown Stanley P, Miller Wayne C, Eason Jane M: Exercise Physiology Basis of Human movement in health and disease. Lippincott Williams & Wilkins.

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar / Class Work / Assignment / Open Discussion	05
<b>Total</b>	<b>20</b>

### **YSc BSc C 19 P: Practical – XII;**

**2 Credits, 52hrs.**

Study the meaning, procedure and benefits of following yogic practices with references and practice.

- 1) Jalaneti
- 2) Sutraneti
- 3) Nauli
- 4) Gajakarani
- 5) Kapalabhati – variations
- 6) Urdhvakukkutasana
- 7) Padangustadhanurasana
- 8) Cakrasana
- 9) Setubandhasarvangasana
- 10) Mulabandhasana
- 11) Astavakrasana
- 12) Tittibhasana
- 13) Hanumanasana
- 14) Natarajasana
- 15) Samakonasana
- 16) Hamsasana
- 17) Pinchamayurasana
- 18) Ujjayi Pranayama
- 19) Anuloma - viloma Pranayama
- 20) Savasana - II

### **Reference Books:**

1. Ann Swanson. (2019). Science of Yoga: Understand the Anatomy and Physiology to Perfect your Practice. Noida: DK England, UP 201 301, India.

2. B.K.S. Iyengar. (2005). *Light on Pranayama*. New York: Element, New York, NY10018, United States.
3. B.K.S. Iyengar. (2006). *Light on Yoga: The Classic Guide to Yoga by the World's Foremost Authority* (6 ed.). Thorsons, London SE1 9GF, United Kingdom.
4. Dharendra Brahmachari. (1970). *Yogasana Vijnana*. Delhi: Asia Publishing House, E-113, Lajpat Nagar, Delhi - 110024.
5. Krishna Bhat, K. (2006). *The Power of Yoga* (1 ed.). Mangalore: Suyoga Publication, Mangalore-574279.
6. Leslie Kaminoff, & Amy Matthews. (2011). *Yoga Anatomy* (2 ed.). Canada: Human Kinetics Publishers, 475 Devonshire Rd, Windsor, ON N8Y 2L5, Canada.
7. Omanand Maharaj. (2013). *Patanjal Yog Pradeep* (2013 ed.). Gorakhpur: Geeta Press Gorakhpur, Uttar Pradesh 273001.
8. Pattabhi Jois. (2010). *Yoga Mala* (2 ed.). Delhi: Picador New Delhi, 110001 India.
9. Shri O P Tiwari. (2005). *Asana Why and How*, Lonavala: Kaivalyadhama, Lonavla, Maharashtra 410403.
10. Srivatsa Ramaswami. (2005). *The Complete Book of Vinyasa Yoga*. Massachusetts: Da Capo Press, Massachusetts, 53 State St, Boston, MA 02109, United States.
11. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.). Lonavala: Kaivalyadhama, Lonavla, Maharashtra 410403.
12. Swami Digambarji, & Dr M L Gharote. (1997). *Gheranda Samhita*. Lonavala: Kaivalyadhama, Lonavla, Maharashtra 410403.
13. Swami Gitananda Giri. (2007). *Mudras*. (Dr Ananda Balayogi Bhavanani, Ed.) Pondichery: Meenakshi Devi Bhavanani, Satya Press, 605013 Pondichery.
14. Swami Kuvalayananda, & Dr S L Vinekar. (1963). *Yogic Therapy Its Basic Principles and Methods*. Delhi: Central Health Govt of India, Nirman Bhavan, New Delhi-110011.
15. Swami Satyananda Saraswati. (2004). *A Systematic Course in the Ancient Tantric Techniques of Yoga and Kriya* (3 ed.). Munger: Yoga Publications Trust, Munger, Bihar, 811201 India.
16. Swami Satyananda Saraswati. (2013). *Asana Pranayama Mudra Bandha*. Munger: Yoga Publications Trust, Munger, Bihar, 811201 India.
17. Swami Satyananda Saraswati. (2002). *Surya Namaskara: A Technique of Solar Vitalization* (2 ed.). Munger: Yoga Publications Trust, Munger, Bihar, 811201 India.
18. Tirumalai Krishnamacharya. (1972). *Yogasanagalu* (3 ed.). Mysore: Prasaranga, Mysore University, Karnataka 570009.

<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical + Record	10
<b>Total</b>	<b>10</b>

## **BSc Yogic Science**

### **VI SEMESTER**

#### **YSc BSc C 20: Yogic Management of Common Disorders**

**3 Credits, 42hrs.**

##### **Objectives:**

- To introduce the Yogic Management of Musculo-Skeletal Disorders.
- To introduce the Yogic Management of Cardio-Respiratory disorders.
- To study Yogic Management of Gastrointestinal – Metabolic and Excretory Disorders.
- To learn about Yogic Management of Obstetric & Gynaecological Disorders.
- To know about Yogic Management of Neurological & Psychological Disorders.

##### **Outcomes:** Students are expected;

- To be able to understand the measurements- investigations to assess the effect of Yogic Management -rationale for the disease specific Yoga protocol, scientific evidence if available, practices of choice and contra-indications. Probable healing mechanisms.
- To be able to prescribe suitable diet regime.

##### **Unit-1: Yogic Management of Musculo-Skeletal Disorders**

**[08Hrs]**

Shat Kriya, Yogic Sukshma and Sthula Vyayama, Asana, Pranayama, Mudra, Bandha, Yoga nidra and Meditation as a form of therapy in various Musculo-Skeletal disorders like Back Pain, Neck pain, Arthritis, Fibromyalgia and Postural deformity etc and relevance of Yogic diet.

##### **Unit-2: Yogic Management of Cardio-Respiratory disorders**

**[09Hrs]**

Shat Kriya, Yogic Sukshma and Sthula Vyayama, Asana, Sectional Breathing Practices, Pranayama, Mudra, Yoga Nidra and Meditation as a form of therapy in various Cardio-Respiratory disorders like Hypertension, Ischemic Heart disease, Common cold, Allergic Rhinitis, Sinusitis & Sleep apnoea and relevance of Yogic diet.

##### **Unit-3: Yogic Management of Gastrointestinal – Metabolic and Excretory Disorders**

**[09Hrs]**

Shat Kriya, Yogic Sukshma and Sthula Vyayama, Asana, Sectional Breathing Practices, Pranayama, Mudra, Yoga nidra and Meditation as a form of therapy in various Gastrointestinal-Metabolic and Excretory Disorders like Dyspepsia (Indigestion), Hyperacidity, Peptic Ulcers, Thyroid Disorder, obesity, Constipation and Irritable Bowel Syndrome and relevance of Yogic diet.

##### **Unit-4: Yogic Management of Obstetric & Gynaecological Disorders**

**[08Hrs.]**

Yogic Sukshma and Sthula Vyayama, Surya namaskar, Asana, Sectional Breathing Practices, Pranayama, Bandha, Mudra, Yoga nidra and Meditation as a form of therapy in



various Obstetric & Gynaecological Disorders like Menstrual Disorder (dysmenorrhea, pre-menstrual syndrome)- Menstrual pain, cramp, polycystic ovarian syndrome (PCOS/ *PCOD*), Menopausal discomfort (anxiety, irritability, insomnia, hot flashes) and relevance of Yogic diet.

**Unit-5: Yogic Management of Neurological & Psychological Disorders [08Hrs.]**

Yogic Sukshma and Sthula Vyayama, Surya namaskar, Asana, Sectional Breathing Practices, Pranayama, Mudra, Yoga nidra and Meditation as a form of therapy in various Neurological & Psychological Disorders like Headaches, Migraine, Dementia, Insomnia, Depression and Stress and relevance of Yogic diet.

**TEXT BOOKS**

1. Bhavanani, A.B. (2013). Yoga Chikitsa: Application of Yoga as a therapy. Pondicherry, India: Dhivyananda Creations.
2. Dr Robin Monro, Dr R Nagarathna and Dr H R Nagendra, Yoga for common ailments, Gaia Publishers
3. Nagarathna R and Nagendra HR, Yoga therapy for common ailments series, SVYP publications, 2010
4. Swami Karmananda, Yoga therapy for common diseases, Yoga publication trust, Munger, 2001

**REFERENCE BOOKS**

1. A.K. Das (Ed.): Medicine Update. Bombay: Association of Physicians of India, 1998.
2. Aatreya, Shanti Parkash: Yoga Manovigyan, Indian Psychology, International Standard Publication, Varanasi; 1965
3. Abhedananda: The Yoga Psychology Ramakrishna Vedanta, Math, Calcutta, 1973.
4. Charu, Supriya: Sarir Rachanaevam Kriya Vigyan
5. Bhavanani, A. B. (2008). Yoga for Health and Healing. Pondicherry, India: Dhivyananda Creations.
6. Dr Robin Monro, Dr R Nagarathna and Dr H. R. Nagendra, Yoga for common ailments, Gaia Publishers
7. Harrison: Principles of Internal Medicine, International Edition, 14th Edition, New York: McGraw Hill Co. Inc., 1998.
8. MDNIY publications: 10 Booklets, Yoga Therapy Series, MDNIY Publications, New Delhi, 2009
9. Nagarathna R and Nagendra H R: Yoga for Arthritis, Back pain, Diabetes, Pregnancy Breathing Practices, Swami Vivekananda Yoga Prakasana, Bangalore, 2000

10. Rai, Lajpat: Discovering Human Potential energy: A Physiological Approach to Yoga (Anubhava Rai Publications, 1998)
11. Ramesh Bijlani: Back to Health through Yoga, Rupa Publications India Pvt. Ltd, 2011
12. Swami Kuvalayananda and S. L. Vanikar: Yoga Therapy: Kaivalyadhama, Lonavala, Revised Edition
13. [Swami SaraswatiShankardevananda](#): Yoga on Hypertension, Yoga publication trust, Munger.
14. [Swami SaraswatiShankardevananda](#): Yogic Management of Asthma and Diabetes, Yoga publication trust, Munger.
15. Swami Satyananda Saraswati: Yoga and Cardio Vascular Management, Yoga Publication Trust, Munger, 2005
16. [Swami Shankardevananda](#): Practices of Yoga for the Digestive System, Yoga publication trust, Munger.

<b>Formative Assessment / IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Class Test (Two Class Tests)	15
Seminar / Class Work / Assignment / Open Discussion	05
<b>Total</b>	<b>20</b>

### **YSc BSc C 20P: Practical – XIII;**

**2Credits, 52hrs.**

Study the meaning, procedure and benefits of following yogic practices with references and practice.

- 1) Vastradhauti
- 2) Shankhaprakshalana.
- 3) Mula Bandha
- 4) Uddiyana Bandha
- 5) Jalandhara Bandha
- 6) Jihva Bandha
- 7) Mahamudra
- 8) Viparitakaranimudra
- 9) Shanmukhimudra
- 10) Tadagi mudra

- 11) Kaki mudra
- 12) Mahabandha
- 13) Mahavedha
- 14) Bhunjangini
- 15) Ashwini
- 16) Yonimudra
- 17) Mandukimudra
- 18) Ujjayi Pranayama
- 19) Nadisuddhi Pranayama
- 20) Savasana - II

### Reference Books:

1. Ann Swanson. (2019). *Science of Yoga: Understand the Anatomy and Physiology to Perfect your Practice*. Noida: DK England, UP 201 301, India .
2. B.K.S. Iyengar. (2005). *Light on Pranayama*. New York: Element, New York, NY 10018, United States.
3. B.K.S. Iyengar. (2006). *Light on Yoga: The Classic Guide to Yoga by the World's Foremost Authority* (6 ed.). Thorsons, London SE1 9GF, United Kingdom.
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5. Krishna Bhat, K. (2006). *The Power Of Yoga* (1 ed.). Mangalore: Suyoga Publication, Mangalore-574279.
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7. Omanand Maharaj. (2013). *Patanjal Yog Pradeep* (2013 ed.). Gorakhpur: Geeta Press Gorakhpur, Uttar Pradesh 273001.
8. Pattabhi Jois. (2010). *Yoga Mala* (2 ed.). Delhi: Picador New Delhi, Delhi 110001 India.
9. Shri O P Tiwari. (2005). *Asana Why and How*. Lonavala: Kaivalyadhama, Lonavla, Maharashtra 410403.
10. Srivatsa Ramaswami. (2005). *The Complete Book of Vinyasa Yoga*. Massachusetts: Da Capo Press, Massachusetts, 53 State St, Boston, MA 02109, United States.
11. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.). Lonavala: Kaivalyadhama, Lonavla, Maharashtra 410403.
12. Swami Digambarji, & Dr M L Gharote. (1997). *Gheranda Samhita*. Lonavala: Kaivalyadhama, Lonavla, Maharashtra 410403.

13. Swami Gitananda Giri. (2007). *Mudras*. (Dr Ananda Balayogi Bhavanani, Ed.) Pondichery: Meenakshi Devi Bhavanani, Satya Press, 605013Pondichery.
14. Swami Satyananda Saraswati. (2004). *A Systematic Course in the Ancient Tantric Techniques of Yoga and Kriya* (3 ed.). Munger: Yoga Publications Trust, Munger, Bihar, 811201India.
15. Swami Satyananda Saraswati. (2013). *Asana Pranayama Mudra Bandha*.Munger: Yoga Publications Trust, Munger, Bihar,811201 India.
16. Swami Satyananda Saraswati. (2002). *Surya Namaskara: A Technique of Solar Vitalization* (2 ed.). Munger: Yoga Publications Trust, Munger, Bihar, 811201 India.
17. Tirumalai Krishnamacharya. (1972). *Yogasanagalu* (3 ed.). Mysore: Prasaranga, Mysore University, Karnataka 570009.

<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Practical	10
<b>Total</b>	<b>10</b>

**BSc Yogic Science**

**VI SEMESTER**

**Research Methodology + Project Work: 12 Credits**

<b>Formative Assessment /IA</b>	
<b>Assessment Occasion</b>	<b>Weightage (in Marks)</b>
Writing	25
Synopsis	15
Execution of the Project	25
Viva voce	15
<b>Total</b>	<b>80</b>

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## Question Paper pattern for the Theory Exams

**Time: 3Hours**

**Max Marks: 80**

I. Answer the following questions **in one word / one sentence** each.

1X10=10

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

II. Match the following

1X5=05

- 1.
- 2.
- 3.
- 4.
- 5.

III. Write short notes to **ANY SEVEN** of the following questions.

5X7=35

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

IV. Explain **ANY THREE** of the following questions.

10X3=30

- 1.
- 2.
- 3.
- 4.
- 5.

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