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NATIONAL EDUCATIONAL POLICY (NEP) - 2020

SYLLABUS FOR CBCS SCHEME

YOGIC SCIENCE
OPTIONAL SUBJECT FOR GRADUATION

OCTOBER 2021

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

YOGIC SCIENCE - OPTIONAL SUBJECT FOR GRADUATION

1. 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 aspect. It is holistic since it 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.

Now a days the educational institutions are producing graduates who are job oriented. The lacking morality in the society is the result of current educational system which is giving science and technology without the firm foundation about the dos and don'ts. Both physical as well as mental health depends upon the hygiene of the thought, speech and the actions. This factor is the decider of our food and lifestyle habits which in-turn defines our health. Therefore, this juncture creates the need of hour to add Yogic science as one subject in every course so that any graduate will learn how maintain the healthy condition of his own and the society.

This optional subject is designed in such a way that one can go for higher studies in therapy, teaching and research. The insights that this paper imparts will help any graduate student to excel in his core subject and molds into a better citizen.

2. 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 NEP 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 lifestyle 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 tranquillity 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

Exit after One Year: Certificate Course

Knowledge	Skills Acquired	Employability
<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>

Exit after Two Years: Diploma Course

Knowledge	Skills Acquired	Employability
<p><i>-In addition to the previous-</i> Basics of Human Anatomy and Physiology, Various Systems and their functioning. Knowledge of yogic practices in few classical texts.</p>	<p><i>-In addition to the previous-</i> 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>

Exit after Three Years: Bachelor's Degree

Knowledge	Skills Acquired	Employability
<p><i>-In addition to the previous-</i> Fundamental of Yoga Shastra – Based on PathanjalaYogasutras</p> <p>Citta and its nature, attainment of concentration. Kriya yoga 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>

Exit after Four Years: B. Sc. (Hons.)

Knowledge	Skills Acquired	Employability
<p><i>-In addition to the previous-</i> Deeper insight towards Hathayoga and Rajayoga, Comparative study. Kundalini yoga and shiva yoga. Asanas, Pranayamas, Bandhas and Mudras; their classifications, practicing methods and benefits (Advanced Level).</p> <p>Practice of various Kriya techniques with advanced level of other practices like asanas and pranayamas.</p> <p>Detailed knowledge about Dietetics and Nutrition; modern and ancient.</p>	<p><i>-In addition to the previous-</i> Ability to blend the theory and practices according to the need during therapy or training.</p> <p>Knowledge of Yoga Philosophy.</p> <p>Ability to compare, analyze and assess the various practicing methods and their results. Conducting prototype research studies like Case Study etc.</p> <p>Developing yogic tools and techniques as solutions for various health problems in the society.</p> <p>Ability to prescribe lifestyle and food suggestions. Counselling and</p>	<p>Assistant Professor, Research Assistant/Fellow, Resource person for Yoga Training Camps and Wellness Camps.</p> <p>All these opportunities are available in India as well as in abroad.</p>

<p>Swarayoga and Yoga Rahasya.</p> <p>Detailed Human Anatomy and Physiology including various systems and Biochemistry.</p> <p>Research methodology.</p> <p>Bhagavadgita, SiddhasiddhantaPaddhati, Evolution theory of yoga, Kundalini yoga (in detail), Upanishad Yoga.</p> <p>Basics of Psychology and comparison with Indian thought. Indian concept of Health, Basics of Yoga Therapy, Effects of Yoga on various systems.</p>	<p>mentoring ability.</p>	
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COURSE PATTERN AND SCHEME OF EXAMINATION

YOGIC SCIENCE

OPTIONAL SUBJECT FOR GRADUATION

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
Semester - I									
DSC-1	Introduction to Yogic Science-I	Theory	4	52	2	40	60	100	4
		Practical	4	52	4	25	25	50	2
OE-1	Introduction to Yogic Science- I	Theory	2	26	2	30	50	80	2
		Practical	2	26	4	10	10	20	1
Semester - II									
DSC-2	Introduction to Yogic Science-II	Theory	4	52	2	40	60	100	4
		Practical	4	52	4	25	25	50	2
OE-2	Introduction to Yogic Science- II	Theory	2	26	2	30	50	80	2
		Practical	2	26	4	10	10	20	1
Semester - III									
DSC-3	Basics Relevant to Yogic Science – I	Theory	4	52	2	40	60	100	4
		Practical	4	52	4	25	25	50	2
OE-3	Basics of Yogic Science	Theory	2	26	2	30	50	80	2
		Practical	2	26	4	10	10	20	1
Semester - IV									
DSC-4	Basics Relevant to Yogic Science – II	Theory	4	52	2	40	60	100	4
		Practical	4	52	4	25	25	50	2
OE-4	Yoga for Health	Theory	2	26	2	30	50	80	2
		Practical	2	26	4	10	10	20	1
Semester - V									
DSC-5	Fundamentals of Yogic Science – I	Theory	3	42	2	40	60	100	3
		Practical	4	52	4	25	25	50	2
DSC-6	Fundamentals of Yogic Science – II	Theory	3	42	2	40	60	100	3
		Practical	4	52	4	25	25	50	2
Semester - VI									
DSC-7	Neurophysiology and Nutrition	Theory	3	42	2	40	60	100	3
		Practical	4	52	4	25	25	50	2
DSC-8	Application of Yogic Science	Theory	3	42	2	40	60	100	3
		Practical	4	52	4	25	25	50	2
	Internship	-	4	52	-	25	25	50	2

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
Semester - VII									
DSC-9	Foundation of Yogic Science	Theory	3	42	2	40	60	100	3
		Practical	4	52	4	25	25	50	2
DSC-10	Ghatayoga and Shivayoga	Theory	3	42	2	40	60	100	3
		Practical	4	52	4	25	25	50	2
DSC-11	Concept of Food; Swara Yoga and Yoga Rahasya,	Theory	3	42	2	40	60	100	3
DSE-1	Human Biology – I	Theory	3	42	2	40	60	100	3
DSE-2	Human Biology – II	Theory	3	42	2	40	60	100	3
RM	Research Methodology	Theory	3	42	2	40	60	100	3
Semester - VIII									
DSC-12	Study of Bhagavadgita and Siddhasiddhantapaddhati	Theory	3	42	2	40	60	100	3
DSC-13	Basics of Integral Approach to Yogic Science,	Theory	3	42	2	40	60	100	3
DSC-14	Upanishad & Consciousness (Isha, Kena and Kathopanishad)	Theory	3	42	2	40	60	100	3
DSE-3	Basics of Psychology with a comparison to Indian thought	Theory	3	42	2	40	60	100	3
DSE-4	Yoga and Health	Theory	3	42	2	40	60	100	3
RP	Research Project	-	6	78	4	80	120	200	6

Guidelines for Practical Examination and Project Work / Dissertation

Two examiners (one internal and one external) have to examine the students based on the following criteria. Then average marks of the two examiners or with consensus have to be recorded. Examination should consist of the following.

For Yoga practical

Writing:

Practicing procedure and benefits of the two yogic practices (decided by the internal & external examiner) has to be explained along with classical references. Duration for writing will be ½ an hour and maximum marks will be 20% with 2 practices carrying equal % of marks.

Practice:

Maximum marks for practices will be 60%. Students have to perform practices as decided by the internal and external examiners. Marks are awarded to the practice as follows-

E.g.

In case of KRIYA,

- Out of 7 marks: 1 mark for preparation, 4 marks for procedure and 2 marks for perfection.

In case of ASANA,

- Out of 7marks: 2 marks for Svasochvasa, 3 Marks for Vinyasa, 1 mark for Sthiti and 1 mark for Drsti.

In case of BANDHA,

- Out of 7 marks: 1 mark for preparation, 4 marks for procedure and 2 marks for perfection.

In case of MUDRA,

- Out of 7 marks: 1 mark for preparation, 4 marks for procedure and 2 marks for perfection.

In case of PRANAYAMA,

- Out of 7 marks: 1 mark for preparation, 4 marks for procedure and 2 marks for perfection.

In case of MEDITATION,

- Out of 7 marks: 1 mark for preparation, 4 marks for procedure and 2 marks for perfection.

Viva:

Maximum marks for viva will be 10%. Questions are to be asked related to the meaning of the practice, practicing procedure, benefits and classical references of the any yogic practices from the particular paper.

Record:

Maximum marks for record will be 10%. Marks have to be given, examining the syllabus coverage, neatness and overall writing.

For Assessment of Internship (25 Marks)

- Successful completion of the Internship – 10 Marks
- Report Evaluation – 15 Marks

For Project Work / Dissertation:

- Report Evaluation – 55% Marks
- Presentation– 30% Marks
- Viva voce – 15% Marks

SYLLABUS FOR OPTIONAL SUBJECT - YOGIC SCIENCE

I SEMESTER

BSCYSCDSC 1: Introduction to Yogic Science-I; 4 Credits, 52Hrs.

Learning Objectives:

- To make the students to know meaning and definitions of yoga, importance of yoga.
- Concepts and mis-concepts about yoga.
- Study of different schools of yoga
- Basics of hathayoga and its development.
- Practical knowledge of few asanas.

Learning Outcome:

The student will have:

- Knowledge of meaning and definitions of yoga, importance of yoga.
- Knowledge of schools of yoga.
- Understanding of Hathayoga, hathayogi, methodology and benefits of asanas.
- Practising knowledge of asanas.
- Self-improvement of health and concentration.

I Yoga: meaning, objective and definitions 13Hrs

- 1) Yoga: meaning, objective and definitions; Importance of Yoga in personal and social life; Concepts and mis-concepts about Yoga.
- 2) Origin of Yoga and its development – Yoga in Samhitas, Brahmanas, Aranyakas, Upanisats and Bhagavadgita;
- 3) Yoga in modern India – RamanaMaharshi, Sri Ramakrishna Paramahansa and Swami Vivekananda, Sri Aurobindo, Sri T Krishnamacharya.

II Schools of Yoga - I 13Hrs

- 1) Hatha Yoga - Meaning, objects and development, Personality of Hatha Yogi; Helping and obstruction elements in Sadhana; Place of practice; Asana: meaning, purpose, preparation; Different Asanas, benefits of Asanas.

- 2) Karma Yoga – Effect of Karma on Character, karmayoga as a scheme of gradual growth, detached work, concept of duty, helping the world, non-attachment, ideal of freedom.

III Schools of Yoga - II

13Hrs

- 1) Raja Yoga – Introduction, limbs of yoga, prana and its control, pratyahara and dharana, dhyana and samadhi.
- 2) Brief introduction to Yoga Sutras of Maharshi Patanjali – four chapters, cittavrttis, isvara, cittaviksepa, overcoming cittaviksepa, samadhi.

IV Schools of Yoga - III

13Hrs

- 1) Bhakti Yoga – Introduction, Isvara, aids to bhakti, incarnations, the mantras, image worship, basic disciplines of bhakti; parabhakti, renunciation, stages of bhakti, the peak of bhakti.
- 2) Jnana Yoga – Religion, true nature of man, maya and illusion, maya, conception of God, maya and freedom, the absolute and the manifestation, God, realization, freedom of the soul, the cosmos.

Reference Books:

1. Vivekananda Swami (2009), Rajayoga, Published from, Advaita Ashram, 5 DehiEntally Road, Kolkata – 700014.
2. Taimini I. K. (1999), The Science of Yoga, The Theosophical Publishing House, Besant Gardens, Besant Ave Rd, Adyar, Chennai, Tamil Nadu - 600020.
3. Adidevananda Swami (1970), Patanjala Yogadarsana Vyasabhasyasahita, Sri Ramakrishna Ashrama, Mysore – 570020.
4. Digambaraji Swami (1970), HathayogaPradipika of Swatmarama, Published by Kaivalyadhama, Lonavala (Dist. Pune), Maharashtra - 410403.
5. Swami Tapasyananda (2015), Four Yogas of Swami Vivekananda, Condensed and Retold, Advaita Ashrama, 5 DehiEntally Road, Kolkata – 700014.
6. Singh Satyaprakash, Edited (2010), History of Yoga; History of Science, Philosophy and Culture in Indian Civilization, General Editor: D. P. Chattopadhyaya, Centre for Studies in Civilization (CSC), DD-24, Kalkaji, New Delhi 110019; Distribution: MunshiramManoharlal Publishers Pvt Ltd, 54, Rani Jhansi Road, New Delhi 110055.
7. OmanandaThirtha Sri Swami, Patanjalyogapradipa, Gita Press, Gorakhpur, P.O. Gita Press, Uttar Pradesh (India), 273 005.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 1P: 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. Surya Namaskara - 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. Ujjayi pranayama
24. Anuloma-Viloma pranayama
25. Savasana – 0

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-574279.
4. JoisPattabhi (1962), Yoga Mala – Part I, Published by AsthangayogaNilaya, Mysore, #235, 8th Cross Rd, 3rd Stage, Gokulam, Mysuru, Karnataka 570002.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Practical	20
Record	05
Total	25

I SEMESTER

BSCYSCOE Open Elective Course 1: Introduction to Yogic Science- I; 3 Credits,52hrs.

Learning objectives:

- Introducing the Yoga and to know the necessity and application in health improvement.
- Knowing different schools of Yoga.
- To introduce concepts inBhagavadgita.
- To study the concept ofTriguna according Bhagavadgita.
- Practical knowledge of Yogic practices.

Learning outcome:

- Knowledge of Health benefits through yoga.
- Knowledge of different schools of Yoga.
- Basic knowledge of Bhagavadgita.
- Basic of concept ofTriguna according Bhagavadgita
- Practice few Yogic practices.

Part A

Unit I Introduction to Yoga 13Hrs

1. Yoga: meaning, objective and definitions,
2. Importance of Yoga in personal and social life, Concepts and mis-concepts of Yoga.
3. Origin of Yoga and its historical development.
4. Yoga for personal health.

Unit II Schools of Yoga; Introduction to Bhagavadgita 13Hrs

1. Hatha Yoga, Raja Yoga, Karma Yoga.
2. Bhakti Yoga, Jnana Yoga, Kundalini Yoga
3. Introduction to Bhagavadgita
4. Concept ofTriguna according Bhagavadgita.

Part B:

Unit III Practical 26 Hrs

Practise the following Practices

1. Swastikasana
2. Vajrasana
3. Suptavajrasana
4. UrdhvaVajrasana
5. Tadasana – 1
6. Tadasana - 2
7. Surya Namaskara - 12 vinyasa
8. Trikonasana
9. Parsvakonasana
10. Virabhadrasana
11. Pascimatanasana - I
12. Purvottanasana
13. Vakrasana
14. Pavanamuktasana
15. Bhujangasana
16. Salabhasana
17. Dhanurasana
18. Ustrasana
19. Upavistakonasana
20. Padottanasana
21. Ujjayi pranayama
22. Anuloma-Viloma pranayama
23. Savasana – 0

Reference Books:

1. Vivekananda Swami (2009), Rajayoga, Published from, Advaita Ashram, 5 DehiEntally Road, Entally, Kolkata, West Bengal 700014.
2. Taimini. I. K. (1999), The Science of Yoga Theosophical, Publishing House, Adyar, Madras, Tamil Nadu – 600090.
3. Adidevananda Swami (1970), Patanjala Yogadarsana Vyasabhasyasahita, Published from Ramakrishna Ashrama, Mysore - 570020 .
4. Dasgupta S.N (1924), Yoga as a Philosophy and Religion, Published from Delhi.

5. Krishnananda Swami (1973), A Short History of Religions and Philosophic Thought in India, Published from The divine life society, Shivanandanagar, Rishikesh.
6. Bhat K. Krishna (2006), The Power of Yoga, Suyoga Publications, Mangalore - 574280.
7. Dr. S. Radhakrishnan (1948), Bhagavadgeetha, Harper Collins, New Delhi- 201307.
8. Chidbhananda Swami (1977), The Bhagavad Gita, Shri Ramakrishna Tapovanam, Tirupparaiturai, Tiruchirapalli Dist., Tamil Nadu - 639115.
9. 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.
10. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Ganga Darshan, Fort, Munger, Bihar 811201.
11. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore- 574279.
12. Jois Pattabhi (1962), Yoga Mala – Part I, Published by Asthangayoga Nilaya, Mysore, #235, 8th Cross Rd, 3rd Stage, Gokulam, Mysuru, Karnataka 570002.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	20
Seminar / Class Work	05
Assignment / Open Discussion	05
Practicals	10
Total	40

II SEMESTER

BSCYSCDSC 2: Introduction to Yogic Science-II;4 Credits,52hrs.

Learning Objectives:

To make the students to have the knowledge of –

- Citta, klesas, threefold affliction, samadhi.
- Nadis, the five sheaths, the chakras, the five pranas.
- Shatkarma, pranayamas and mudras.
- Practical knowledge of few asanas.

Learning Outcome:

The student will have –

- Understanding of the citta, cittavrtti, klesas, samadhi, threefold pain.
- Yogic anatomical knowledge of nadis, the sheaths, pranas and the chakras.
- Knowledge of shatkarma, pranayamas and mudras.
- Practical knowledge of few asanas.
- Skill to work as assistant in yoga practical teaching.

I	Introduction to Study of Citta	13Hrs
	1) Five kleshas, tapatraya. antarayas.	
	2) Concept of citta, cittavrttis, stages of citta.	
	3) Methods of controlling chittavrttis.	
	4) Samadhi and its kinds.	
II	Introduction to Yogic Anatomy	13Hrs
	1) Yogic anatomy – Nadis, Susumanadi.	
	2) Pancha Koshas – constituents, functions.	
	3) Pancha Pranas – location, functions.	
	4) Six Chakras, Sahasrara chakra – location, structure, tattvas associated, functions.	
III	Brief study of Yogic Practices - I	13Hrs
	1) Shat-Karma – classification, procedure and benefits according to Hatha Yoga Pradeepika	

- 2) Shat-Karma, classification, procedure and benefits according to Gheranda Samhita.

IV Brief study of Yogic Practices - II

13Hrs

1. Pranayammas – Definition, types, procedure and benefits according to Hatha Yoga Pradeepika.
2. Mudras – Definition, types, procedure and benefits according to Hatha Yoga Pradeepika.

Reference Books:

1. Vivekananda Swami (2009), Rajayoga, Published from, Advaita Ashram, 5 DehiEntally Road, Kolkata – 700014.
2. Taimini I. K. (1999), The Science of Yoga, The Theosophical Publishing House, Besant Gardens, Besant Ave Rd, Adyar, Chennai, Tamil Nadu - 600020.
3. Adidevananda Swami (1970), Patanjala Yogadarsana Vyasabhasyasahita, Sri Ramakrishna Ashrama, Mysore – 570020.
4. Virupakshananda Swami (1995), Sankhyakarika of Iswara Krishna, Published by Sri Ramakrishna Math, Mylapore, Madras -600 004.
5. Gore M. M. (2005), Anatomy and Physiology of Yogic Practices, published by New Age International (P) Ltd., Publishers, 7/30A, Near LIC Flats, Darya Ganj, New Delhi 110002.
6. Digambaraji Swami (1970), HathayogaPradipika of Swatmarama, Published by Kaivalyadhama, Lonavala (Dist. Pune), Maharashtra - 410403.
7. Digambarji Swami (1978), Gheranda Samhita, Published by Kaivalya dhama, Lonavala (Dist. Pune), Maharastra - 410403.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 2P: Practicals – II;**2 credits; 52Hrs.**

Part – A: 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. Ardha Chandrasana
11. Vaidika Suryanamaskara – 9 Vinyasa.
12. Padangusthasana
13. Parsvottanasana
14. Purvottanasana
15. Janu Sirsasana
16. Marichasana – I
17. Navasana
18. Kurmasana
19. Jatharaparivarta
20. Bharadvajasana
21. Ardha Matsyendrasana
22. Uttanapadasana
23. Ujjayi pranayama
24. Anuloma-Viloma pranayama
25. Savasana-1

Part – B: Assisting in Practicals of Yoga Camps.

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-574279.
4. JoisPattabhi (1962), Yoga Mala – Part I, Published by AsthangayogaNilaya, Mysore, #235, 8th Cross Rd, 3rd Stage, Gokulam, Mysuru, Karnataka 570002.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Practical	15
Record	05
Assisting in Practicals of Yoga Camps.	05
Total	25

II SEMESTER

BSCYSCOE Open Elective Course 2: Introduction to Yogic Science– II;

3 Credits,52Hrs.

Learning objectives:

- To introduce Yoga concept in Gheranda Samhita
- Introduction to Human Anatomy and Physiology.
- To study basic of different systems in human body.
- Practical knowledge of Yogic practices.

Learning outcome:

The candidates will be able to-

- Describe the Health benefits through yoga.
- Describe different schools of Yoga.
- Basic knowledge of Human Anatomy and Physiology.
- Practice few Yogic practices.

Part A

Unit I Introduction to Ghatayoga 14Hrs

1. Ghata yoga – Introduction, Kriyas- 21 varieties of practices & benefits;
2. Asana – practicing methods and benefits,
3. Pranayama, preparation, types of practice, benefits.

Unit II Introduction to Human Anatomy and Physiology- I 14Hrs

1. Introduction to anatomy and physiology of Blood, Immune system and Cardiovascular system - Composition of blood, Blood groups and importance; Blood volume, Blood Pressure and diseases. Lymphatic System;
2. Cardiovascular System - brief anatomy and physiology, Brief introduction to anatomy and physiology of Musculoskeletal system.
3. Digestive system, Respiratory system, Excretory system, Nervous system, Endocrine and Reproductive system.

Part B

Unit III Practical 26Hrs

Practise the following Practices

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

Reference Books:

1. Digambaraji Swami (1970) , HathayogaPradipika of Swatmarama, Published by Kaivalyadhama, Lonavala (Dist. Pune), Maharashtra - 410403.
2. Digambarji Swami (1978), Gheranda Samhita, Published by Kaivalyadhama, Lonavala (Dist. Pune), Maharashtra - 410403.
3. HathayogaPradipika of Swatmarama (1994), Published by The Adyar library and research Centre, Chennai, Tamil Nadu 600090.
4. Swami Niranjanananda, GherandaSamhita, Bihar School of Yoga, Ganga Darshan, Fort, Munger, Bihar 811201.
5. Swami Digambarji, GherandaSamhita, Kaivalyadhama, Lonavala(Dist. Pune), Maharashtra - 410403.

6. Evelyn C. Pearce (1982), Anatomy and Physiology for Nurses, published by Faber and Faber Ltd., London, 1968.
7. Prof. A. K. Jain (2002), Human Physiology and Biochemistry, Arya Publications, Industrial area, Trilokpur Road, Kala Amb-173030, Sirmour, HP.
8. Ross and Wilson (2006), Anatomy and Physiology in Health and Illness, 10th edition, Elsevier Publication. New York.
9. 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.
10. SatyanandaSaraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Ganga Darshan, Fort, Munger, Bihar 811201.
11. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore-574279.
12. JoisPattabhi (1962), Yoga Mala – Part I, Published by AsthangayogaNilaya, Mysore, #235, 8th Cross Rd, 3rd Stage, Gokulam, Mysuru, Karnataka 570002.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	20
Seminar / Class Work	05
Assignment / Open Discussion	05
Practicals	10
Total	40

III SEMESTER

BSCYSCDSC 3: Basics Relevant to Yogic Science – I;4Credits,52hrs.

Learning Objectives:

To study-

- Basic anatomy and physiology of human Musculo-skeletal system.
- Basic anatomy and physiology of human digestive and excretory systems.
- Technical terms of Yoga.
- Practical knowledge of few asanas.
- Working pattern of Yoga centers / Institutions.

Learning Outcome:

The student will have -

- Brief understanding of cells and tissues.
- Basic anatomy and physiology of Human Musculo-skeletal, digestive and excretory systems.
- Knowledge of yogic terminologies.
- Capacity to read and understand classical texts of yoga.
- Knowledge of working of Yoga Institutions.
- Self-improvement of health and concentration.

I Basic Human Anatomy and Physiology - I 13Hrs

- 1) Cell, Tissues – Epithelial tissue, connective tissue, vascular tissue, muscle tissue, nerve tissue.
- 2) Basic anatomy and physiology of digestive system – components of digestive system, digestive glands and their secretions, digestion and absorption of carbohydrates, proteins, fats.

II Basic Human Anatomy and Physiology – II 13Hrs

- 1) Basic anatomy and physiology of human Respiratory system – Definition of respiration, components of the respiratory system.
- 2) Steps in respiration, pressures in respiration, respiratory volumes, external and internal respiration, transport of gases.

III Basic Human Anatomy and Physiology – III

13Hrs

- 1) Basic anatomy and physiology of cardio vascular system – components of cardiovascular system, location and structure of human heart, conduction system of heart.
- 2) Cardiac cycle, heartbeat, heart rate, heart sounds, pulse, stroke volume, cardiac output, blood pressure, pulmonary and systemic circulations.

IV Basics of Yogic Practices from Hatharatnavali 13Hrs

- 1) Introduction to Hatharatnavali, Mahayoga – stages, mantrayoga, layayoga, rajayoga and hathayoga. Eight purificatory techniques, eight pranayamas.
- 2) Yama of manas, niyama, 84 yogic postures; Samadhi, four stages of yoga, yogic description of body.

Reference Books:

1. A.K. Jain. (2017). *Human Physiology and Biochemistry for Physical Therapy and Occupational Therapy* (3 ed.). Delhi: Arya Publications Delhi - 110065.
2. Evelyn C. Pearce (1982), *Anatomy and Physiology for Nurses*, Published by Faber and Faber Ltd., London, 1968.
3. Prof. A. K. Jain (2002), *Human Physiology and Biochemistry*, Arya Publications, industrial area, Trilokpur Road, Kala Amb-173030, Sirmour, HP.
4. Ross and Wilson (2006), *Anatomy and Physiology in Health and Illness*, 10th edition, Elsevier Publication. New York.
5. Prof M Venkata Reddy (Edited) (2011), *Hatharatnavali of Srinivasabhata Mahayogindra*, M. S. R. Memorial Yoga Series, Arthamuru, East Godavari District, A. P., India – 533340.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05

Total	40
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BSCYSCDSC 3P: Practicals – III;**2 credits, 52hrs.**

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

1. Swastikasana
2. Tadasana – parsva
3. Suryanamaskara - 17 Vinyasa
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. Ujjayi Pranayama
19. Anuloma-Viloma pranayama
20. Savasana -2

Part – B: Visiting a minimum of two Yoga Centers / Yoga Institutions and submission of the Report.

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. JoisPattabhi (1962), Yoga mala – Part I, Published by AsthangayogaNilaya, Mysore.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Practical	15
Record	05
Report of visiting Yoga Centers / Yoga Institutions	05
Total	25

III SEMESTER

BSCYSCOE Open Elective Course 3: Basics of Yogic Science; 3 Credits, 52hrs.

Learning Objectives:

- To introduce the study of Hathayoga text.
- To introduce varieties of hathayogic practices.
- To study the application of various practices under Hathayoga.
- Practical knowledge of Yogic practices.

Learning Outcome:

- Basic knowledge of Hathayoga and its practices.
- Knowledge of Yogic food system.
- Theoretical knowledge of pranayamas.
- Practice few Yogic practices.

Part A

I Introduction to Hathayoga, Asanas, Food System 13Hrs

- 1) Relationship of Hathayoga and Rajayoga, Greatness of Hathayoga, Hathayogiparampara, Importance of Hatha and its secrecy.
- 2) Place of Hathayoga practice, Destructives and constructive of yoga, Yama and Niyama, Asana, Methods of Hathayoga Practice.
- 3) Mitahara, Pathya and Apathya, Rules in food taking.

II Kriyas and Pranayamas 13Hrs

- 1) The six kriyas – practicing method and benefits.
- 2) Benefits of Pranayama, Nadishuddi Pranayama, Duration and time for Pranayama practice, gradation of Pranayama, Sweat and Pranayama, Food during Pranayama practice.
- 3) Importance of Pranayama practice, symptoms of Nadishuddhi, Classification of Kumbhaka and its benefits, Hathayogasiddhilakshanam.

Part B

III Practical 26 Hrs

Practise the following Practices

1. Swastikasana

2. Suryanamaskara - 17 Vinyasa
3. Utthitapadangustasana
4. Parivrttatrikonasana
5. Prasaritapadottanasana
6. Bhekasana
7. Pascimottanasana - II
8. Purvottanasana
9. Ardhabaddhapadmapascimottanasana
10. Tiryanmukhaikapadapascimottanasana
11. Suptapadangustasana
12. Urdhvamukhapascimottanasana
13. Baddhakonasana
14. Simhasana
15. Akarnadhanurasana
16. Ujjayi Pranayama
17. Anuloma-Viloma pranayama
18. Savasana -2

Reference Books:

1. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.). Lonavala: Kaivalyadhama Lonavla, Maharashtra 410403.
2. Swami Muktibodhananda. (1998). *Hatha Yoga Pradipika* (4 ed.).Munger: Bihar School Of Yoga, Munger, Bihar 811201 India.
3. Swami Satyananda Saraswati.& Swami Muktibodhananda Saraswati. (1985). *Hatha Yoga Pradipika The Light on Hatha Yoga*. Munger: Bihar School of YogaMunger, Bihar 811201 India.
4. Iyengar B.K.S (2003), *Light on Yoga*, Published by Harper Collins Publishers, India
5. SatyanandaSaraswati Swami (1997), *Asana, Pranayama, Mudra, Bandha*, Published by Bihar School of Yoga, Munger, Bihar.
6. Bhat K. Krishna (2006), *The Power of Yoga*, Suyoga Publications, Mangalore - 574279.
7. JoisPattabhi (1962), *Yoga mala – Part I*, Published by AsthangayogaNilaya, Mysore.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	20
Seminar / Class Work	05
Assignment / Open Discussion	05
Practicals	10
Total	40

IV SEMESTER

BSCYSCDSC 4: Basics Relevant to Yogic Science – II; 4Credits,52hrs.

Learning Objectives:

- To study basic anatomy and physiology of human respiratory system and special senses.
- To study basic anatomy and physiology of human endocrine system and reproductive systems.
- To study technical terms of yoga.
- To develop the ability to read and understand the classical texts of yoga.
- To develop the skill to teach yogic practices.

Learning Outcome:

The student will have-

- Knowledge of Basics of anatomy and physiology of human respiratory system, special senses, endocrine system and reproductive systems.
- The capacity to understand classical texts of yoga.
- Self-improvement of health and concentration.
- Skill to teach yogic practices.

I Basic Human Anatomy and Physiology - IV

13Hrs

- 1) Basic anatomy and physiology of excretory system – definition, excretory products, urinary system, structure of kidneys, nephron, formation of urine, concentration of urine, functions of kidneys.
- 2) An introduction to Human Nervous System – divisions, coverings of the Central Nervous System; human brain – divisions, forebrain, midbrain, hindbrain; functional areas of the cerebral cortex – sensory areas, motor areas, association areas, functions of different parts of the brain, the spinal cord.

II Basic Human Anatomy and Physiology– V

13Hrs

- 1) Basic anatomy and physiology of human Endocrine system – components, hormones, pituitary gland, hormones and functions, thyroid gland, hormones and functions, parathyroid gland, adrenal glands, hormones and functions, pancreas –

Islets of Langerhans, hormone and function, Testes and Ovaries, hormones and functions.

- 2) Basic anatomy and physiology of human Reproductive system – structure of sperm, human ovary, Graafian Follicle, human egg, fertilization, implantation, the placenta, role of hormones in reproduction.

III Basics of Yogic Practices from Shivasamhita- I

13Hr

- 1) The layayoga – karma kanda and jnana kanda, the spirit, yoga and maya, paramahansa, emanation and involution; knowledge of tattvas, nerve centers, nerves.
- 2) Yoga and its practice – vayu, guru, adhikari, place etc., pranayama, the stages, vayu siddhi, siddhis, ghata, paricaya and nispatti, the postures.

IV Basics of Yogic Practices from Shivasamhita- II

13Hr

- 1) Mudras – Yoni mudra, awakening of kundalini, the practise of nine mudras.
- 2) Rajayoga – dharma, jnana, four kinds of yoga, kinds of sadhakas, Invocation of shadow, various kinds of dharana, the six chakras, the rajayoga.

Reference Books:

1. Evelyn C. Pearce (1982), Anatomy and Physiology for Nurses, Published by Faber and Faber Ltd., London, 1968.
2. Prof. A. K. Jain (2002), Human Physiology and Biochemistry, Arya Publications, industrial area, Trilokpur Road, Kala Amb-173030, Sirmour, HP.
3. Ross and Wilson (2006), Anatomy and Physiology in Health and Illness, 10th edition, Elsevier Publication. New York.
4. Tortora J. D. *et al.* (2009), Principles of Anatomy and Physiology, Published by John Wiley and Sons, New Jersey.
5. Rai Bahadur Srisa Chandra Vasu (Translated) (2004), The Shiva Samhita, Chaukhamba Sanskrit Pratishthan, 38 U. A. Bungalow Road, Jawahar Nagar, P. B. No.2113, Delhi – 110007.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 4P: Practicals – IV;**2 credits,52hrs.**

Part – A: Study the meaning, procedure and benefits of following yogic practices with references and practice.

1. Swastikasana
2. Baddhapadmasana
3. Padahastasana
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. Ujjayi Pranayama
20. Anuloma-Viloma pranayama
21. Soham Meditation
22. Savasana -2

Part – B: Practical Teaching in Yoga Camp / Yoga Training – two of 10 to 15 days / one of 20 to 30 days.

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. JoisPattabhi (1962), Yoga mala – Part I, Published by AsthangayogaNilaya, Mysore.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Practical	15
Record	05
Practical Teaching in Yoga Camp / Yoga Training	05
Total	25

IV SEMESTER

BSCYSCOE Open Elective Course 4: Yoga for Health; 3 Credits, 52hrs.

Learning Objectives:

- To know the use of Yoga for health.
- Knowledge of principles of yoga for health.
- Concept of food and health.
- Practical knowledge of Yogic practices.

Learning Outcome:

The student will be able to

- Understand daily routine and good conduct.
- Explain application of yoga for personal health.
- Understanding and application of food for health.
- Practice few Yogic practices.

Part A

I. Concept of Food and Health 13 Hrs

1. Nutrition –Macro nutrients in diet – Carbohydrate, Protein, Fat
2. Nutrition –Micro nutrients in diet - Vitamins, Minerals
3. Concept of Mitahara and Pathyapathya, Concept of Food and Triguna
4. Health – Definitions according Indian System and Modern System.

II. Yoga for Health 13Hrs

1. Sadvimsatitva theory, Tridosha theory, Pancakosa theory
2. Dinacarya, Abhyanga, Vyayama, Sadvrta, Rtucarya
3. A general survey of use of Lifestyle, Asana, Pranayama, Mudra, Kriya etc. for health.

Part B

III Practical 26 Hrs

Practise the following Practices

1. Swastikasana
2. Baddhapadmasana

3. Padahastasana
4. Virabhadrasana - II
5. Ardhabaddhapadmottanasana
6. Garudasana
7. Utkatasana
8. Marिकासana - 3
9. Pasasana
10. Dhanurasana - parsvasahita
11. Paryankasana
12. Vrksahasana
13. Viparitararani
14. Halasana
15. Uttanapadasana
16. Ujjayi Pranayama
17. Anuloma-Viloma pranayama
18. Soham Meditation
19. Savasana -2

Reference Books:

1. A.K. Jain. (2017). *Human Physiology and Biochemistry for Physical Therapy and Occupational Therapy* (3 ed.). Delhi: Arya Publications,1002, Faiz Rd, Block T, Nai Walan, Karol Bagh, New Delhi, Delhi 110005.
2. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.). Lonavala: Kaivalyadhama Lonavla, Maharashtra 410403.
3. Swami Vivekananda. (1982). *Raja Yoga*. Culcutta:Advaita Ashrama Delhi Entally Road Culcatta 700014.
4. Kanjiv Lochan. (2017). *Astanga Hridaya of Vagbhata Vol. I - III*.New Delhi: Chaukhambha Publications ,New Delhi, Delhi 110002.
5. M. M. Gore. (2017). *Anatomy and Physiology of Yogic Practices: Understanding of the Yogic concepts and physiological mechanism of the yogic practices* (6 ed.).New Delhi : New Age Books, Delhi,110002 India.
6. Kuvalayananda Swami and Vinekar, *Yogic Therapy*, Kaivalyadhama, Lonavala, Pune, Maharastra 410 403.
7. Iyengar B. K. S. (2003), *Light on Yoga*, Published by Harper Collins Publishers, India.

8. SatyanandaSaraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
9. Bhat K. Krishna (2006), the Power of Yoga, Suyoga Publications, Mangalore.
10. JoisPattabhi (1962), Yoga mala – Part I, Published by AsthangayogaNilaya, Mysore.
11. Swami Shankaradevananda Sarasvati, Yogic Management of common diseases, Bihar School of Yoga, Munger.
12. Krishna Bhat, K. (2006). *The Power Of Yoga* (1 Ed.). Mangalore: Suyoga Publication,574279 Mangalore.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	20
Seminar / Class Work	05
Assignment / Open Discussion	05
Practicals	10
Total	40

V SEMESTER

BSCYSCDSC 5: Fundamentals of Yogic Science – I; 3 Credits, 42hrs.

Learning Objectives:

- To get introduced to the subject of Yoga.
- Study about the qualities of seer, citta and Isvara.
- To study the citta-vikshepas and techniques of cittaprasadana.
- To study the Kriya-Yoga, its necessity and practice benefits.
- To learn advanced practices.

Learning Outcome:

- Candidate will obtain foundation to the Yoga Shastra.
- Ability to understand the context of Yoga sutras.
- Brief insight towards the Indian Psychology.
- Knowledge of Kriya Yoga according to Yoga sutra.
- Ability to practice and teach advanced asanas.

Unit I Nature of Yoga Science 14Hrs

1. Nature of Yoga Science, Definition of Yoga, the nature of seer in pure and modified state.
2. Vrttis – Nature, classification, definition, method to control of cittavrttis. Samprajnata Samadhi and its classification, Asamprajnata and its classification. Variation in the attainment of Asamprajnata Samadhi;
3. Ishwarapranidhana – a means to attain Samadhi, Definition & quality of Ishwara.

Unit II Chittaprasadana 14Hrs

1. Chittavikshepa, Chittaprasadana and its associates, control of Chittavikshepa, different methods of manasthiti and its benefits,
2. Samapatti, Sukshma-vishayatva, Sabijasa-madhi, Speciality of Nirvichara, Rthambaraprajna, Nirbijasa-madhi.

Unit III Kriya-yoga 14Hrs

1. Kriya-yoga and its benefits; classification, methods to control kleshas,
2. Karmasaya. Vipaka of kleshamula, Heyaswarupa, Heyahetu, Drsyas and Drasta.

Reference Books:

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

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 5P: 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. JoisPattabhi (1962), Yoga mala – Part I, Published by AsthangayogaNilaya, Mysore.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Practical	20
Record	05
Total	25

2. Karma, Vasana, Smrti and Samskara, Support of vasana, Guna and its existence, Vastu, Jnata and Ajnata of Vastu.
3. Quality of purusha, non-self-illumination of Buddhi and its function. Chitta, Dharmamegha Samadhi, Infinite knowledge.
4. Mutation of Guna, Krama, Pratiprasava and Kaivalya –According to Patanjala Yogasutra – Chapter IV.

Reference Books:

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

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 6P: Practicals – VI;**2 credits,52hrs.**

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. JoisPattabhi (1962), Yoga mala – Part I, Published by AsthangayogaNilaya, Mysore.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Practical	20
Record	05
Total	25

VI SEMESTER

BSCYSCDSC 7: Neurophysiology and Nutrition;3 Credits, 42hrs.

Learning Objectives:

- To study the anatomy and physiology of Nervous System.
- To study CNS in detail.
- To study EEG and brain waves.
- To study about macro and micro nutrients.
- To learn advanced practices; Asanas along with basics of Pranayama and Meditation.

Learning Outcome:

- Knowledge of anatomy and physiology of Nervous System.
- Detailed knowledge of CNS.
- Knowledge of modern concept nutrition.
- Ability to practice and teach advanced asanas.

Unit I Introduction to Nervous System 14hrs

1. Introduction of nervous system, Central nervous system, Cranial Nerves and spinal nerves, Sympathetic and parasympathetic nervous system;
2. Neurons- structure& function, synapses, Function of ganglion axon and dendrites.

Unit II Central Nervous System 14hrs

1. Structure of Brain, parts of brain, general introduction of left and right brain hemisphere, spinal cord;
2. Electro Encephalogram, Nature of brain waves and general introduction of Alfa waves, Beta waves, Theta waves and Delta waves.

Unit III Nutrition 14hrs

1. Nutrition – Macro nutrients in diet – Carbohydrate, Protein, Fat;
2. Nutrition –Micro nutrients in diet - Vitamins, Minerals.

Reference Books:

1. Chatterjee C. C. (1992), Human Physiology (Vol. I & II), Published by Medical Allied Agency, Calcutta, 1992.

2. Evelyn C. Pearce (1982), *Anatomy and Physiology for Nurses*, Published by Faber and Faber Ltd., London, 1968.
3. Tortora J. D. *et al.* (2009), *Principles of Anatomy and Physiology*, Published by John Wiley and Sons, New Jersey.
4. Satyanarayana U. (2008). *Essentials of Biochemistry* (2 ed.). Delhi: Books & Allied Ltd. New Delhi - 110 002.
5. Prof. A. K. Jain (2002), *Human Physiology and Biochemistry*, Arya Publications, industrial area, Trilokpur Road, Kala Amb-173030, Sirmour, HP.
6. Ross and Wilson (2006), *Anatomy and Physiology in Health and Illness*, 10th edition, Elsevier Publication. New York.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 7P: Practicals – VII;**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. Marjalarasana 1
13. Marjalarasana 2
14. Urdhvabaddhakonasana
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. JoisPattabhi (1962), Yoga mala – Part I, Published by AsthangayogaNilaya, Mysore.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Practical	20
Record	05
Total	25

Reference Books:

1. Satyananda Saraswati Swami (1997), Asana, Pranayama, Mudra, Bandha, Published by Bihar School of Yoga, Munger, Bihar.
2. Kuvalayananda Swami and Vinekar, Yogic Therapy, Kaivalyadhama, Lonavala, Pune, Maharashtra 410 403.
3. Gore M.M. (2005), Anatomy and physiology of yogic practices, Published by New Age Books, New Delhi.
4. Swami Shankaradevananda Sarasvati, Yogic Management of common diseases, Bihar School of Yoga, Munger.
5. Irene Carmine (2008), Hidden secrets of Yogic diet for weight loss, published by Jaico, Ahmedabad.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 8P: Practicals – VIII;**2 credits,52hrs.**

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

1. Padmasana
2. Vasisthasana
3. Visvamitrasana
4. Kasyapasana
5. Vrscikasana
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. JoisPattabhi (1962), Yoga mala – Part I, Published by AsthangayogaNilaya, Mysore.

INTERNSHIP:2 Credits

Organizing Yoga Camp / Yoga Training – two of 10 to 15 days each / one of 20 to 30 days and submission of the **Report**.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Organizing the Camp / Training	15
Report	10
Total	25

VII SEMESTER

BSCYSCDSC 9: Foundation of Yogic Science; 3 Credits,42hrs.

Learning Objectives:

To acquaint the students with –

- Hathayoga, its tradition
- Practices of Hathayoga
- Kundalini yoga and samadhi

Learning Outcome:

- Knowledge of Relationship of Hathayoga and Rajayoga.
- Knowledge of kriyas, asanas, pranayamas and Mudras of Hathayoga.
- Ability to apply the asanas and kriyas.
- Theoretical base which can be helpful in learning Yoga Therapy.
- Understanding of Yogic food concept.

I Introduction to Hatha yoga, Asanas

14Hrs

- 1) Relationship of Hathayoga and Rajayoga, Greatness of Hathayoga, Hathayogiparampara, Importance of Hatha and its secrecy.
- 2) Place of Hathayoga practice, Destructives and constructive of yoga, Yama and Niyama.
- 3) Asana, Methods of Hathayoga Practice.
- 4) Mitahara, Pathya and Apathya, Rules in food taking, Hathayoga achievements.

II Pranayamas, Kriyas

14Hrs

- 1) Benefits of Pranayama, Nadishuddi Pranayama, Duration and time for Pranayama practice, gradation of Pranayama, Sweat and Pranayama, Food during Pranayama practice.
- 2) Yukta and Ayukta Pranayama, Satkriyas, Gajakarani.
- 3) Importance of Pranayama practice, symptoms of Nadishuddhi, Manonmani.
- 4) Classification of Kumbhaka and its benefits, Hathayogasiddhilakshanam.

III Kundalini, Mudras and Bandhas, Practise of Samadhi

14Hrs

- 1) Kundalini's base for all Yoga, Results of Kundalini Prabodha, Synonyms for Sushumna,
- 2) Mudras and Bandhas-classification, benefits and methods of practice. Nadanusandhana, Kandaswarupa.
- 3) Methods of Samadhi Practice, Synonyms for Samadhi, Rajayoga, Amaroli; Relation between Hathayoga and Moksha, Merging of Prana and Manas, Laya.
- 4) Shambhavimudra, Unmani, Khechari, Nadanusandhana, Characteristics of Nada, Pratyahara; Different types of Nada, Condition of Yogi in Unmani Avastha, Realisation.

Reference Books:

8. I.K. Taimni. (1972). *The Science of Yoga*. Wheaton, IL: Quest Books, U.S., 306 W. Geneva Road Wheaton, IL 60187.
9. Parmhansa Swami Annat Bharati. (2017). *Hatha Yoga Pradipika*. Varanasi: Chaukhamba K37/117, Gopal Mandir Lane Golghar, Maidagin Varanasi-221001.
10. Shree Sahajananda. (2006). *Hatha Yoga Manjari* (1 ed.). Lonavala: Kaivalyadhama Lonavla, Maharashtra 410403.
11. Swami Atmananda. (1966). *The Four Yogas*. Mumbai: Bharatiya Vidya Bhavan Mumbai 400034.
12. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.). Lonavala: Kaivalyadhama Lonavla, Maharashtra 410403.
13. Swami Digambarji, & Dr M L Gharote. (1997). *Gheranda Samhita*. Lonavala: Kaivalyadhama Lonavla, Maharashtra 410403.
14. Swami Muktibodhananda. (1998). *Hatha Yoga Pradipika* (4 ed.). Munger: Bihar School Of Yoga, Munger, Bihar 811201 India.
15. Swami Muktibodhananda. (2012). *Hatha Yoga Pradipika: Light on Hatha Yoga*. Munger: Yoga Publications Trust, Munger, Bihar 811201 India.
16. Swami Niranjanananda Saraswati. (2012). *Gheranda Samhita* (1 ed.). Munger: Bihar School of Yoga, Munger, Bihar 811201 India.

17. Swami Satyananda Saraswati.& Swami Muktibodhananda Saraswati. (1985). *Hatha Yoga Pradipika The Light on Hatha Yoga*.Munger:Bihar School of YogaMunger, Bihar811201 India.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 9P: Practicals – IX;**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, 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.
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, 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.

Formative Assessment /IA

Assessment Occasion	Weightage (in Marks)
Practical	20
Record	05
Total	25

VII SEMESTER

BSCYSCDSC 10: Ghatayoga and Shivayoga; 3 Credits,42hrs.

Learning Objectives:

- To study the classical Hathayoga text Gheranda Samhita.
- To introduce varieties of hathayogic practices.
- To study the application of various practices under Ghatayoga.
- To compare and study Ghatayoga and Hathayoga.
- To know the attainment of Samadhi through Shivayoga.
- To learn advanced practices; Asanas along with basics of Pranayama and Meditation.

Learning Outcome:

- Basic knowledge of Ghatayoga and its practices.
- Ability to apply the practices of Ghatayoga.
- Knowledge of Dharana and Dhyana practice according to Shivayoga.
- Ability to compare Hathayoga and Ghatayoga and apply.
- Ability to practice and teach advanced asanas.

I Ghatayoga and its applications - I

14Hrs

- 1) Introduction to Ghatayoga
- 2) Study of Shatkarma
- 3) Study of Asanas
- 4) Study of Mudras

II Ghatayoga and its applications - II

14Hrs

- 1) Pratyahara– Classification, Practising methods and benefits.
- 2) Pranayama– Classification, Practising methods and benefits.
- 3) Meditation– Classification, Practising methods and benefits.
- 4) A comparative study of Hathayoga and Ghata yoga.

III Methods of Samadhi Practice in Siva yoga

14Hrs

- 1) Shivayogadipika – Introduction, Classification of yoga, Classification of Rajayoga. Comparison between Rajayoga and Shivayoga.
- 2) Evolution theory, two types of Shivajnana, Qualities of a teacher, Shivaswarupa. Importance of physical health, Hatha yoga a means to attain physical health, Bahya yoga, Antaranga yoga, Yama, Niyama, Asana.

- 3) Place of practice of Hathayoga, Pranayama, Prakrtayoga, Vaikrtayoga, Kevalakumbhaka, Amana yoga, Ajapagayathri. Nadi, Pranava, Bandha, Duration of Pranayama, and Meditation. Antarangayoga – Pratyahara, object for Meditation, Posture, Chakra, Adhara, Means to control Citta.
- 4) Dharana, Duration and Objects of Dharana, Samadhi and definition, Conducivesfor Samadhi. Benefits of Astangayoga – Hathayoga – Layayoga – Mantrayoga.

Reference Books

1. Sadasiva Brahmendra Saraswathi. (1978). *Shiva Yoga Deepika*, Anandashram Sanskrit Granthavali, Anandashram Sanstha, Pune, Maharashtra 411 002.
2. Sadasiva Brahmendra Saraswathi. (1978). *Shiva Yoga Deepika*. Pondichery: Anand Ashram Series, 605104, Chinna Mudaliyar Chavady Pondichery.
3. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.). Lonavala: Kaivalyadhama Lonavla, Maharashtra 410403.
4. Swami Digambarji, & Dr M L Gharote. (1997). *Gheranda Samhita*. Lonavala: Kaivalyadhama Lonavla, Maharashtra 410403.
5. Swami Muktibodhananda. (1998). *Hatha Yoga Pradipika* (4 ed.). Munger: Bihar School Of Yoga, Bihar 811201 India.
6. Swami Niranjanananda Saraswati. (2012). *Gheranda Samhita* (1 ed.). Munger: Bihar School of Yoga Bihar, Bihar 811201 India.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

BSCYSCDSC 10P: Practical – X;**2 credits,52hrs.**

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

- 1) Vastradhauti
- 2) Shankhprakashana.
- 3) MulaBandha
- 4) UddiyanaBandha
- 5) JalandharaBandha
- 6) JihvaBandha
- 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.
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, 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 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.
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.

Formative Assessment /IA	
Assessment Occasion	Weightage (in Marks)
Practical	20
Record	05
Total	25

VII SEMESTER

BSCYSCDSC 11: Concept of Food; Swara Yoga and Yoga Rahasya; 3 Credits,42hrs.

Learning Objectives:

To acquaint the student in fundamentals of

- Dietetics and nutrition.
- Swara 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 Swara Yoga and Yoga Rahasya 14Hrs

- 1) Swara yoga in brief, Sound and Form of Swara
- 2) TattwaVichara, Swara 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 LtdNew 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 PublicationMangalore-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: KaivalyadhamaLonavla, Maharashtra 410403.
7. Swami Digambarji, & M L Gharote. (1997). *Gheranda Samhita*.Lonavla:KaivalyadhamaLonavla, 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)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VII SEMESTER

BSCYSCDSE - Elective 1: Human Biology – I; 3 Credits,42hrs.

Learning Objectives:

To study

- Anatomy and physiology of the muscular skeletal system.
- The blood, immune system and cardiovascular system.
- The respiratory system.
- Anatomy and physiology of digestive system.

Learning Outcome:

The student will understand:

- Anatomy and physiology of human muscular-skeletal system, immune system, cardiovascular system, respiratory, excretory and digestive systems.
- Anatomy and physiology of human body in relation to different yogic practices.
- The effect of yogic practices in a better way.

I Anatomy&Physiologyof Blood,ImmuneSystem&Cardiovascular System14Hrs

- 1) Composition of blood corpuscles – R.B.C., W.B.C., Platelets, Plasma, Hemoglobin, Coagulation of blood and anticoagulants.
Blood groups and its importance.
- 2) Lymphatic system, Immunity – types & mechanism.
- 3) Cardiovascular System-Anatomy of Heart, Innervation of heart – Properties of cardiac muscle.
- 4) Control of cardiac cycle and circulation,Cardiac output, Blood pressure, Training on Blood Pressure measuring.

II Anatomy & Physiology of Respiratory System and Excretory System 14Hrs

- 1) Respiratory system - Anatomy Gross & Histological, Mechanism of breathing, Exchange of gases.
- 2) Pulmonary function tests – lung volumes, Control of Respiration.
- 3) Excretory System - Anatomy – Gross & Histological, Functions of glomerulus and renal tubules – Micturition and composition of urine.
- 4) Structure and functions of skin, Regulation of body temperature.

III Anatomy & Physiology of Digestive System and Musculo-Skeletal System 14Hrs

- 1) Digestive System, Anatomy – Gross & Histological, Mechanism and role of secretion of Saliva, Gastric Juice.
- 2) Mechanism and role of secretion of Pancreatic juice, Bile, Intestinal secretion, Absorption and assimilation, formation of faeces.
- 3) Muscle – Classification – Histology – Properties of each type –Distribution. Mechanism of muscle contraction (Brief) – Neuromuscular transmission (brief), ligaments, tendons.
- 5) Skeleton-Bones-types, Structure & function, Spinal column; Joints – Types, Structure, Function.

Reference Books:

1. A.K. Jain. (2017). *Human Physiology and Biochemistry for Physical Therapy and Occupational Therapy* (3 ed.). Delhi:Arya PublicationsDelhi - 110065.
2. Ann B. McNaught, & Robin Callander. (1991). *Illustrated Physiology* (5 ed.). (B R Mackenna, Ed.) London: Churchill LivingstoneUnited Kingdom.
3. Anne Waugh, & Allison Grant. (2006). *Ross and Wilson Anatomy and Physiology in Health and Illness* (10 ed.).London: Churchill Livingstone, Theobalds Road London WC1X 8RW, United Kingdom.
4. Chatterjee CC. (2020). *C C Chatterjees Human Physiology Vol 1* (13 ed.). New Delhi: CBS Publishers & Distributors Pvt Ltd, New Delhi-110002India.
5. Evelyn Pearce. (1993). *Anatomy and Physiology for Nurses* (16 ed.). New Delhi: Jaypee Brothers New Delhi110002Delhi.
6. Gerard J. Tortora, & Bryan H. Derrickson. (2017). *Tortora's Principles of Anatomy and Physiology* (15 ed.). New Jersey: John Wiley & SonsNJ 07030, United States.
7. John E. Hall. (2015). *Guyton and Hall Textbook of Medical Physiology (Guyton Physiology)* (13 ed.). Philadelphia: SaundersPA 19106-3399.
8. K. Sembulingam, & Prema Sembulingam. (2016). *Essentials of Medical Physiology* (7 ed.). Delhi:Jaypee Brothers Medical Publishers110002Delhi.
9. Nitin Ashok John. (2019). *CC Chatterjee's Human Physiology, Volume 2:* (13 ed.). New Delhi: CBS Publishers & Distributors Pvt Ltd,New Delhi-110002 India.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VII SEMESTER

BSCYSCDSE - Elective 2: Human Biology – II; 3 Credits,42hrs.

Learning Objectives:

- To study anatomy and physiology of Central Nervous system.
- To know the anatomy and physiology of Special senses.
- Endocrine and Reproductive system.
- Knowledge of Biochemistry

Learning Outcome:

The student will understand:

- Anatomy and physiology of Central Nervous system, Special senses, Endocrine and Reproductive system.
- Biochemistry with respect to Enzymes, Metabolism, water balance, electrolyte and Acid-Base balance.
- Anatomy and physiology of human body in relation to different yogic practices.

I Anatomy and Physiology of Central Nervous System, Special Senses 14Hrs

- 1) Anatomy – Gross – Cerebrum, Cerebellum, Spinal cord; Histology – Nerve – structure and properties of neurons – Nerve – Action Potential – Generation – Propagation – Factors influencing, classification of neurons and nerve fibers, Receptors and reflex arc.
- 2) Functions and important connections of Cerebrum, Pons, Medulla, Thalamus, Hypothalamus, Cerebellum; Autonomic nervous system – Sympathetic and Parasympathetic.
- 3) Eyes –Anatomy, Histology of retina, corneal function; Physiology of vision & accommodation.
- 4) Sense of smell – nasal mucosa; Tongue, taste buds; Ear – Mechanism of hearing and function of semicircular canal.

II Anatomy and Physiology of Endocrine System& Reproductive System 14Hrs

- 1) Gross & Histological anatomy of Thyroid, Parathyroid, Supra – renal, Pituitary, Islets of Langerhans.Hormones of pituitary gland – its action and effect of hypo & hyper activity on the body.

- 2) Function of thyroid and parathyroid hormone, effect of hypo and hyperactivity on the body. Role of insulin in glucose metabolism. Hormones of supra-renal glands and their action and effect of hypo & hyper activity on the body.
- 3) Anatomy – Gross & Histology of Male reproductive system Spermatogenesis.
- 4) Anatomy – Gross & Histology of Female reproductive system, ovarian hormones; Menstruation, Pregnancy, Parturition, Lactation.

III Biochemistry

14Hrs

- 1) Enzymes - Definitions, specificity, inhibitors and activators, Properties of enzymes.
- 2) Metabolism - Digestion and absorption of carbohydrates.
- 3) Digestion and absorption of Proteins and fats.
- 4) Water balance mechanism, Electrolyte and Acid-Base balance.

Reference Books:

1. A.K. Jain. (2017). *Human Physiology and Biochemistry for Physical Therapy and Occupational Therapy* (3 ed.). Delhi: Arya Publications 4805/24, Bharat Ram Road, Darya Ganj, New Delhi, Delhi 110002.
2. Ann B. McNaught, & Robin Callander. (1991). *Illustrated Physiology* (5 ed.). (B R Mackenna, Ed.) London: Churchill Livingstone, Lacon House 84 Theobalds Road London WC1X 8RW United Kingdom.
3. Anne Waugh, & Allison Grant. (2006). *Ross and Wilson Anatomy and Physiology in Health and Illness* (10 ed.). London: Churchill Livingstone, Lacon House 84 Theobalds Road London WC1X 8RW United Kingdom.
4. Chatterjee Cc. (2020). *C C Chatterjees Human Physiology Vol 1* (13 ed.). New Delhi: CBS Publishers & Distributors Pvt Ltd, New Delhi, Delhi 110002 India.
5. Evelyn Pearce. (1993). *Anatomy and Physiology for nurses* (16 ed.). New Delhi: Jaypee Brothers, New Delhi, Delhi 110002.
6. Gerard J. Tortora, & Bryan H. Derrickson. (2017). *Tortora's Principles of Anatomy and Physiology* (15 ed.). New Jersey: John Wiley & Sons, 111 River St, Hoboken, NJ 07030, United States.
7. John E. Hall. (2015). *Guyton and Hall Textbook of Medical Physiology (Guyton Physiology)* (13 ed.). Philadelphia: Saunders, The Curtis Center, Independence Square West, Philadelphia, PA 19106-3399..

8. K. Sembulingam, & Prema Sembulingam. (2016). *Essentials of Medical Physiology* (7 ed.). Delhi: Jaypee Brothers Medical Publishers, New Delhi, Delhi 110002.
12. Satyanarayana J, U Chakrapani. (2007), *Biochemistry*, Delhi: LBooks and Allied (P) LtdNew Delhi, Delhi 110002.
13. Shirley Telles. (2014). *A Glimpse of a Human Body*. Bangalore: Swami Vivekananda Yoga Prakashana, 19, Bagappa Rd, Gavipuram Extention, Kempegowda Nagar, Bengaluru, Karnataka 560019.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VII SEMESTER

BSCYSC Research Methodology;

3 Credits,45hrs.

Learning Objectives:

To make the students to understand:

- Research process.
- Different research designs.
- Research studies in Yoga.
- Use of statistics in research.

Learning Outcome:

The student will be able to:

- Describe the research process to conduct studies in Yogic sciences.
- Describe the processing operations.
- Describe and use the selected statistical tests for research in Yogic science.

Describe and use appropriately the procedure for publications.

I Introduction

14hrs

- 1) Meaning, types of research - Descriptive, Applied, Quantitative, Conceptual and Psychological research; Scientific research.
- 2) Research process – Steps involved, Criteria of good research.
- 3) Methods of data collection.
- 4) Meaning and Necessity of a research problem; Techniques of defining a research problem.

II Research Design and Sampling

14hrs

- 1) Meaning and purpose of research design, Features of a good design.
- 2) Research design in exploratory, descriptive & diagnostic research studies, Basic principles of experimental designs
- 3) Sampling – Steps in sampling, Characteristics of a good sample design;
- 4) Different types of Non probability and Probability sample designs

III Hypothesis, Variables and Research Analysis

14hrs

- 1) Hypothesis-Meaning, Null and alternative hypothesis, Characteristics of a good hypothesis; Procedure for Hypothesis Testing.

- 2) Meaning and concept of variables, Types of variables; Importance of Experimental and control group.
- 3) Processing operations, Types of analysis.
- 4) Statistics in Research; t-test, Chi – Square test, F – test, ANOVA.

Reference Books:

1. Kothari, C.R. (2019)*Research Methodology -Methods & Techniques*, New Age International Publishers; Fourth edition. New Delhi 110002, (INDIA).
2. Goode, W.I. (1952). *Method in Social Research*, New York: McGraw-Hill
3. Kerlinger, F.N. (1986). *Foundation of Behavioural research*, Prism Books, Bangalore 560070.
4. Mohisin. *Research Methods in Behavioural Sciences*, S.M.Orient Longman Limited, New Delhi.
5. Nachmias D(1981). *Research Method in Social Sciences*, Nachmias St.Martins Press, New York.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VIII SEMESTER

BSCYSCDSC 12: Study of Bhagavadgita and Siddhasiddhantapaddhati;

3 Credits, 42hrs.

Learning Objectives:

To make the students to understand:

- Sankhya, Karma yoga and Jnana yoga according to Bhagavadgita.
- Dhyana yoga, Dhyana and Shraddhatraya according to Bhagavadgita.
- Yogic concepts in text SiddhasiddhantaPaddhati.

Learning Outcome:

The student will be able to:

- Know Sankhya, Karma yoga and Jnana yoga according to Bhagavadgita.
- Describe the Dhyana yoga, Dhyana and Shraddhatraya according to Bhagavadgita.
- Describe and use the Yogic concepts in text SiddhasiddhantaPaddhati.

I Study of Bhagavadgita - I 14 Hrs

- 1) Sankhya yoga according to Bhagavadgita Chapter II
- 2) Karma yoga according to Bhagavadgita Chapter III
- 3) Jnana yoga according to Bhagavadgita Chapter IV

II Study of Bhagavadgita - II 14 Hrs

- 1) Dhyana yoga according to Bhagavadgita Chapter VI
- 2) Gunatraya according to Bhagavadgita Chapter IX
- 3) Shraddhatraya according to Bhagavadgita Chapter XVII

III Study of SiddhasiddhantaPaddhati 14Hrs

- 1) Aim & objectives, misconceptions about Hathayoga, prerequisites of Hathayoga (dashayama and dasa niyama).
- 2) Sadhaka and Badhaka tattvas in Hathayoga; Concept of Ghata, Ghatashuddhi, Concept and importance of Shodhana kriyas in Hathayoga; Importance of Shodhana kriyas in health and disease.
- 3) Concept of Matha, Mitaahara, Rules & Regulations to be followed by Hatha Yoga Sadhakas.

Reference Books:

1. Dr.S.Radhakrishnan(1948),Bhagavadgeetha, Harper Collins, New Delhi-201307.
2. Radhakrishnan, P. (1995). *The Bhagavadgita*.New York:Aquarian, NY 10022, United States.
3. Chidbhavananda. Swami (1977), The Bhagavad Gita, Shri Ramakrishna Tapovanam, Tirupparaitturai, Tiruchirapalli Dist., Tamil Nadu - 639115.
4. Chidbhavananda. Swami (1977), The Bhagavad Gita, Shri Ramakrishna Tapovanam, Tirupparaitturai, Tiruchirapalli Dist., Tamil Nadu - 639115.
5. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.).Lonavala: KaivalyadhamaLonavla, Maharashtra 410403.
6. Swami Digambarji, & M L Gharote. (1997). *GherandaSamhita*.Lonavla:KaivalyadhamaLonavla, Maharashtra 410403.
7. Swami Ranganathananda. (2016). *The Message of The Upanishads*.Mumbai:Bharatiya Vidya BhavanMumbai 400034.
8. Swami Satyananda Saraswati. (2006). *Sure Ways to Self-Realization*.Munger:Bihar School of Yoga Bihar,811201 India.
9. Gharote. M. L. (2019), Siddhasiddhantapaddhati of Gorakshanatha, The Lonavla Yoga Institute, Lonavla 410 401.
10. Chandradhar Sharma. (2016). *A Critical Survey of Indian Philosophy* (14 ed.). Delhi:Motilal Banarsidass,Jawahar Nagar,Delhi, 110007 Delhi.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VIII SEMESTER

BSCYSCDSC 13: Basics of Integral Approach to Yogic Science; 3 Credits,42hrs.

Learning Objectives:

- Historical development of Yoga and Yogic science.
- Chronological development of Yogic science.
- Fundamentals of Kundalini Yoga.
- Fundamentals of Naturopathy, Pranic Healing.
- Fundamentals of various therapy techniques.

Learning Outcome:

- Health concepts of Indian system.
- Basic concept of Yoga philosophy.
- Knowledge of various therapeutical methodslike Naturopathy, Pranic Healing.
- Knowledge of origin and historical development of Yoga and Kundalini Yoga

I Evolution theory of Yoga 14Hrs

- 1) Sankhyayoga – Introduction, 3-fold afflictions, means to overcome afflictions.
- 2) 25 entities according to Sankhya, means of knowledge, Satkaryavada, similarities and dissimilarities of vyakta and avyakta, Triguna, Subtle body.
- 3) Evolution theory of Yoga.
- 4) Isvara, Citta, Buddhi&Manas in Yoga.

II Fundamentals of Naturopathy, Pranic Healing, other yogas, Different Meditational Techniques 14Hrs

- 1) Naturopathy, Pranic Healing, Reckhi – Concepts, objects and basics.
- 2) Fundamentals of Siddhasamadhi yoga, Divyayoga and Sudarshanakriya yoga.
- 3) Meditational Techniques-Vipasana, Preksha, Transcendental
- 4) Meditational Techniques: Saguna- with statue, light(lamp) etc. and Nirguna - without object – Svasa, Pranava, Soham etc.

III Origin and Historical study of Yoga and Kundalini Yoga 14Hrs

- 1) Origin and Historical development of yoga and yogic texts up to Patanjali
- 2) Historical development of yoga in the period of Patanjali and Post Patanjali period.
- 3) Kundalini Yoga - Historical development, principles of Kundalini yoga;

System of Nadies, Senses, Chakras, Marmasthanas.

- 4) Function and form of Chakras; Prana, its classification, awakening of Kundalini and Samadhi.

Reference Books:

1. Chandradhar Sharma. (2016). *A Critical Survey of Indian Philosophy* (14 ed.). Delhi:Motilal Banarsidass110007Jawahar Nagar, Delhi.
2. Isvara Krsna. (1995). *Samkhya Karika*. (Swami Virupakshananda, Ed.) Kolkatta: Advaita AshramaKolkata, West Bengal 700014.
3. Iswara Krishna. (2007). *Sankhya Karika And The Bhashya; Or Commentary Of Gaudapada*.Montana:Kessinger Pub CoMontana, 59937, United States.
4. J.C. Aggarwal. (2010). *Principles, Methods and Techniques of Teaching* (2 ed.). Chennai:Vikas Publication House Pvt LtdChennai, Tamil Nadu 600034.
5. Krishna Bhat, K. (2006). *The Power Of Yoga* (1 ed.). Mangalore: Suyoga Publication, Mangalore-574279.
6. Pandit, M. (2013). *Kundalini Yoga* (2 ed.). Delhi: Lotus PressNew Delhi, 110002.
7. Saraswati Satyananda. (2013). *Kundalini Tantra*.Munger:Yoga Publications TrustMunger, Bihar 811201.
8. Shakti Parwah Kaur Khalsa. (1996). *Kundalini Yoga: The Flow of Eternal Power*.New York:Penguin USA,1745 Broadway, New York, NY 10019, United States.
9. Sir John Woodroffe/Arthur Avaon. (2003). *The Serpent Power*.Chennai:Ganesh & CoChennai, Tamil Nadu 600094.
10. Swami Atmananda. (1966). *The Four Yogas*.Mumbai:Bharatiya Vidya BhavanMumbai 400034.
11. Shivananda. Swami (2010), *Kundalini Yoga*, The Divine Life Society, Post Shivanandanagar, Rushikesh Tehri Gharwal Uttarakhand 249 192.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VIII SEMESTER

**BSCYSCDSC 14: Upanishad&Consciousness(Isha, Kena and Kathopanishad);
3Credits,42hrs.**

Learning Objectives:

- To know the basics of Aupanishadic Yoga.
- To know the yogic methods in Upanishads.
- Understanding Karma theory in Upanishads.

Learning Outcome:

After the completion of course the student will be able to understand-

- AupanishadicYoga and its application in Yoga practice.
- Yogic concepts in the selected Upanishads and their practical usage.
- Describe and to apply the discriminativeknowledge in the Upanishads.

Unit I Introduction to Upanishads 14hrs

1. Definition of Upanishad, Introduction of Aupanishadic literature.
2. Importance of Upanishad
3. Aupanishadic theory of Advaita, dvaita and Trait.

Unit II Karma 14hrs

1. Karma, types of Karma, Karmaliptata, Karmatyaga – Karmavipaka, Purusharthachatushtya.
2. Vidya – Avidya and Shambhuti – Vinasha; Indriya (sense organs), Five Jnanedriya and five Karmendriya, Concept of manas.
3. Relation between senses and Consciousness, Vishayas – Shabda, Sparsha, Roopa, Rasa and Gandha.

Unit III Nachiketopakhyana 14hrs

1. Nachiketopakhyana, Definition of Mrityu (death), Death and Consciousness, Death and human body.
2. Temptating power of Vishayas, Immortality of the soul, Shreyas – Preyas and Swarga – Naraka.

3. Nature of Consciousness, What is knowledge of soul, means of knowledge of soul, knowledge and logic, liberation: as the result of Jnana, definition of liberation, Rta and Satya.

Reference Books:

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

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VIII SEMESTER

BSCYSCDSE - Elective 3: Basics of Psychology with a comparison to Indian thought; 3 Credits,42hrs.

Learning Objectives:

- To know the basics of personality in Psychology.
- To study about Cognition, Memory, and Human intelligence.
- To study the concept of personality in Indian system and yogic methods.
- Understanding the Indian Systems of Knowledge & Comparative Study of Sankhya and Yoga.

Learning Outcome:

After the completion of course the student will be able to understand-

- Basics of personality in Psychology.
- The concept of personality in Indian system.
- Improvising Cognition, Memory, and Human intelligence.
- Describe and to apply the Indian Systems of Knowledge & Comparative Study of Sankhya and Yoga.

I Basics of Psychology.

14hrs

- 1) Concept of personality in Psychology; Theories of personality – Freud’s, Humanistic theories, Trait theories; learning approaches to personality, measuring personality.
- 2) Cognition - Thinking, making decisions, problem solving; Human memory – views, kinds of information stored, forgetting.
- 3) Memory distortion and construction, memory in everyday life, memory and the brain.
- 4) Human intelligence, measuring intelligence, role of heredity and environment, emotional intelligence, creativity.

II Basics of Psychology with a comparison to Indian thought.

14hrs

- 1) Concept of personality in Indian system – Sthoola; Sookshma, Karana sarira and relationship with the pancakoshas.
- 2) Gunas and personality, samskaras and kleshas along with lifestyle; Tridosas

and Personality.

- 3) Mental Health – Health and well-being, Stress: its causes, effects and control.
- 4) Mental disorders – mood disorders, anxiety disorders. Management of mental disorders.

II Indian Systems of Knowledge & Comparative Study of Sankhya and Yoga

14hrs

- 1) Introduction to - Nyaya, Vaisheshika.
- 2) Introduction to - Mimamsa and Vedanta.
- 3) Philosophy of Sankhya and Yoga, evolution theory.
- 4) Comparison of Sankhya and yoga.

Reference Books:

1. Virupakshananda, Swami. (1995) *Sankhyakarika of Ishwarakrishna*, Sri Ramakrishna Math, Mylapore, Madras 600 004.
2. Sharma, Chandradhara. *A critical survey of Indian Philosophy*, Motilal BanarsiDass,.
3. Swami Janananda (1938). *Philosophy of Yoga*, Sri Ramakrishnasharma Publications, Mysore 570 020.
4. S.N. Dasgupta (2002). *Yoga as a Philosophy and Religion*, Dover Publications Inc. Mineola, New York.
5. Swami Krishnananda (1973). *A short history of religions and philosophic thought in India: The divine life society*, Shivanandanagar, Rishikesh 249192.
6. M.P.Pandit (1959). *Kundalini Yoga*, Ganesh & Co., Madras 600094.
7. Sir John Woodroffe (2003). *The Serpent Power*, Ganesh & Co.; Madras 600094.
8. Dr. S. Radhakrishnan (1948), *Bhagavadgeetha*, Harper Collins, New Delhi-201307.
9. Radhakrishnan, P. (1995). *The Bhagavadgita*. New York: Aquarian, NY 10022, United States.
10. Chidbhavananda. Swami (1977), *The Bhagavad Gita*, Shri Ramakrishna Tapovanam, Tirupparaiturai, Tiruchirapalli Dist., Tamil Nadu - 639115.
11. Swami Harshananda (2009). *The Six Systems of Hindu Philosophy*, Ramakrishna Math, Bangalore – 560 019.
12. Hall and Lindzey (2007). *Theories of Personality*, Wiley Eastern Ltd., New Delhi 201301.

13. Robert A Baron (2014), *Psychology*, Indian Subcontinent Edition, Girishwar Misra Pearson India Education Services Pvt. Ltd, 7th Floor, Knowledge Boulevard, Sector 62, Noida 201 309, Uttar Pradesh.
14. Stanger, R & Solley 1970), *Basic Psychology*, Tata Mcgraw Hill, New Delhi 201301.
15. S. K. Mangal (2009). *General Psychology*, Sterling Publishers (P) Ltd, A-59, Okhla Industrial Area, Phase-II, New Delhi – 110 020.
16. Zimbardo (1979) *PGI Psychology and life*, Foresonam Co., Illinvi.
17. Krishna Bhat, K. (2006). *The Power Of Yoga* (1 ed.). Mangalore: Suyoga Publication Mangalore-574279.
18. 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)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VIII SEMESTER

BSCYSCDSE- Elective 4: Yoga and Health; 3 Credits,42hrs.

Learning Objectives:

To make the students to understand

- Basic of applying Yoga practices.
- Principles of Yoga in improvising health.
- Daily routine, seasonal routine.
- Preventive, promotive and curative aspects of Yoga practices.
- Effects of Yogic practices on different systems of the Human body.

Learning Outcome:

After the course, the student will be able to:

- Describe Sadvimsathitattva theory, Pancakosa theory, Tridosha theory and application of these theories in practical manner.
- Describe the principles of daily routine, seasonal routine and their importance in Yoga therapy.
- Describe effect of Yogic practices on selected systems of the human body.
- Describe the use of lifestyle, Kriyas, Asanas, Pranayamas, Mudra and Meditation for preventive, promotive and curative aspects to improve health.

I Health and its basic concepts in Indian thought. 14hrs

- 1) Definitions of Health, Indian concepts, Modern concepts, WHO etc.
- 2) Dhatus and Malas, Pathya and Apathya food, Healthy Life style.
- 3) Usage of the following herbs - Shunti, Tila, Madhu, Marica, Brahmi, Bhumyamalaki, Jeera, Dhanyaka, Patola, Godhuma.
- 4) Dinacarya and Rtucarya

II Basis of Yoga Therapy 14hrs

- 1) 25 Tattva thoery
- 2) Tridosha Theory, Sadrasa and Pancamahabhuta

- 3) Pancakosha theory
- 4) Preventive, Promotive and Curative aspects of Yogic Practices.

III Effect of Yogic practices on various systems. 14hrs

- 1) Digestive system, Respiratory system
- 2) Cardiovascular system, Excretory System.
- 3) Reproductive system, Nervous System.
- 4) Endocrine system, Skeletal System.

Reference Books:

1. Swami Digambaraji. (1998). *Hathapradipika* (1998 ed.).Lonavala: KaivalyadhamaLonavla, Maharashtra 410403.
2. Vagbhata. (2000). *Vagbhata'sAstangaHridayam*,English Translation, Translated by Prof. K R Srikantha Murthy, ChowkhambaKrishnadas Academy.
3. Athavale, V. B. (2005). *Basic Principles of Ayurveda*, Chaukhamba Sanskrit Pratishthan, Oriental Publishers & Distributors, IN.
4. Bhagavan Dash& R. K. Sharma (2009)*Caraka Samhita: Text with English Translation's Critical Exposition Based on Cakrapani Datta'sAyurveda Dipika* (7 Volumes), Chowkhamba Sanskrit Series, 37/99, Gopal lane, Near Golghar, Varanasi UP 221001.
5. Dr. H. R. Nagendra, (1990). *New Horizons in Modern Medicine*, Vivekananda Kendra, Bangalore, India 560019.
6. Kuvalayananda (1998). *Asanas*, Kaivalyadhama, Lonavala, Pune 410 403.
7. Kuvalayananda(2005). *Pranayama*,Kaivalyadhama, Lonavala, Pune 410 403.
8. M.M.Gore (2017). *Anatomy and Physiology of Yogic Practices*, NewAge Books. Lonavla 410 406.
9. K.N.Udupa (2007). *Stress and its Management by Yoga*,MothilalBanarsidas, Delhi, Sixth Reprint edition 110028.
10. Virupakshananda, Swami.(1995) *Sankhyakarika of Ishwarakrishna*, Sri Ramakrishna Math, Mylapore, Madras 600 004.
11. Swami Vivekananda (2011). *Rajayoga*, Advaita Ashrama, 5 DehiEntally Road, Kolkatta, 700014.

12. Swami Satyananda Saraswati (2013). *Asana, Pranayama, Mudra, Bandha*- Bihar School of Yoga, Munger.
13. Swami Satyananda Saraswati (2004). *A systematic course in the ancient tantra techniques of yoga & Kriya*, Bihar School of Yoga, Munger 811201.

Formative Assessment / IA	
Assessment Occasion	Weightage (in Marks)
Class Test (Two Class Tests)	30
Seminar / Class Work	05
Assignment / Open Discussion	05
Total	40

VIII SEMESTER

RESEARCH PROJECT 6 Credits

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

Question Paper pattern for the Theory Exams

Time: 3Hours

Max Marks: 60

I. Answer the following questions **in one word / one sentence** each. $1 \times 10 = 10$

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

II. Write short notes to **ANY SIX** of the following questions.

$5 \times 6 = 30$

- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.

III. Explain **ANY TWO** of the following questions.

$10 \times 2 = 20$

- 19.
- 20.
- 21.
- 22.
