

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. In Yoga (CBCS)
(Effective for 2020-2021 Admission Session)

Choice Based Credit System
140 Credit (3-Year UG Hons.) MAKAUT Framework
w.e.f 2020-21 B.SC YOGA
B.Sc. Yoga Curriculum Structure

1ST SEMESTER

Subject Type	Course Name	Course Code	Credit Distribution			Credit Points	Mode of Delivery			Proposed Moocs
			Theory	Practical	Tutorial		Offline	Online	Blended	
CC 1	HUMAN SYSTEM ACCORDING TO EASTERN & WESTERN CONCEPT	BSY 101	5	0	1	6	✓			As per MAKAUT Notification
CC 2	YOG-ABHYASA	BSY(T) 102	4	0	0	6	✓			
		BSY 192	0	2	0					
GE 1	Students will have to select from the GE Basket					6			✓	
AECC 1	ENGLISH COMMUNICATION	BSY 164	2	0	0	2	✓			
Semester Credits						20				

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB**Syllabus of B. Sc. In Yoga (CBCS)****(Effective for 2020-2021 Admission Session)****COURSE: HUMAN SYSTEM ACCORDING TO EASTERN & WESTERN CONCEPT****CODE: BSY 101****COURSE OBJECTIVE:**

The course is designed to provide an in-depth knowledge about the structure and functions of the human body and the interrelations between the different body parts in the practice of various yogic postures. Students will also be able to develop an understanding of the evolution of human body, the Pancha Kosha Theory and discern the concept of the Chakras, Mandalas, Vayus, Nadis & Swara Yoga.

Sl	Course Outcome
1	Outline the structure of the body
2	Illustrate the important functions of the body
3	Understand the involvement of their body parts while practicing various postures of yoga
4	Understand the Evolution of Human Body
5	Understand the Pancha Kosha Theory
6	Have the knowledge about the Chakras, Mandalas, Vayus, Nadis & Swara Yoga

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)
Module 1	Introduction to Human Body Musculoskeletal System Digestive System	10	15	1,2
Module 2	Urinary system Blood & Lymphatic system Cardiovascular System	10	15	1,2
Module 3	Nervous System Special Senses Respiratory System	10	15	1,2
Module 4	Endocrine System Reproductive system	10	15	1,2
Module 5	Evolution of Human Body Pancha Kosha Theory	10	20	1,2,3
Module 6	Chakras & Mandalas Vayus, Nadis & Swara Yoga	10	20	1,2,3
		60	100	

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. In Yoga (CBCS)
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Credits- 5L + 1T

MODULE 01

8L + 2T

- Introduction to Human Anatomy and Physiology, Basic Anatomical and Physiological terminologies.
- Cell: Structure & Functions, different cell organelles and their functions.
- Tissues and Organization of human system; Introduction to Support Systems.
- Maintenance Systems, Control Systems, Defense System and Concept of Homeostasis.

Musculoskeletal System.

- The Skeletal System: Skeleton, Functions of skeleton, Classification of bones, Study of joints.
- Structure and function of a Synovial joint.
- The Muscular System: Types of Muscles in the body.
- The characteristics, structure and functions of the Skeletal Muscles, Smooth Muscles and Cardiac Muscles.

Digestive System.

- Gross anatomy of digestive system, functional anatomy of Buccal cavity, Pharynx, Esophagus, Stomach, Small intestine, Large intestine and Anal canal.
- Physiology of digestion, assimilation & peristalsis, Gastric and digestive juices involved in digestion & associated glands involved in digestive system.

MODULE 02

8L + 2T

Urinary system.

- Anatomy of urinary tract with special reference to anatomy of kidney and nephrons, functions of kidney and urinary tract, physiology of urine formation, micturition reflex.
- Role of kidneys in acid base balance, role of RAS in kidney and disorders of kidneys.

Blood & Lymphatic system.

- Composition of blood corpuscles – RBC, WBC and Platelets.
- Blood: Composition and Functions, Blood groups and their importance.
- Plasma, hemoglobin – coagulation of blood and anti-coagulants.
- Sites, functional anatomy of lymph nodes and their function.
- Lymphatic system and its role in immune system.

Cardiovascular System.

- Functional anatomy of the Heart, arteries, veins and capillaries.
- The organization of systematic and pulmonary circulation, the cardiac cycle.
- Cardiac output and Venous return.
- Blood pressure and Regulation of blood pressure.

MODULE 03

8L + 2T

Nervous System.

- An introduction to Histology – nerve – structure and properties of neurons – nerve – action potential – generation propagation – factors influencing classification of neurons and nerve fibers, neuralgia cells, receptors and reflex arcs.
- Functional anatomy of Cerebrum, Cerebellum, spinal cord.
- Functions and importance of the parts of the brain viz., cerebrum, pons, medulla, thalamus, hypothalamus, cerebellum and autonomic nervous system [sympathetic and parasympathetic].

Special Senses.

- Functional anatomy and physiology of eyes, ears, nose, tongue and skin.

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. In Yoga (CBCS)
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Respiratory System.

- Gross anatomy of the respiratory passages, functions of Nasal cavity, Pharynx, Larynx, Trachea, Bronchus, Lungs and Alveoli.
- The process of Respiration, Lung volumes & capacities, Mechanics of breathing and exchange of gases in alveoli.

MODULE 04

9L + 1T

Endocrine System.

- Anatomical structure of important endocrine glands (Pituitary, thyroid, parathyroid, pancreas, adrenal and gonads).
- Short anatomy of the hypothalamus and the releasing hormones secreted from it.
- Structure and function of anterior and posterior Pituitary.
- Function of thyroid, parathyroid, suprarenal and islets of Langerhans.

Reproductive system.

- Functional anatomy male reproductive system, seminal vesicles and prostate glands.
- Spermatogenesis.
- Functional anatomy of female reproductive system.
- Ovarian hormones, menstruation, pregnancy, parturition and lactation.

MODULE 05

9L + 1T

Evolution of Human Body.

- Panchamahabhutas, Panchatattvas and Panchatanmatras.
- Evolution of human body in the context of Sankhya Darshana.
- Evolution of Jnanendriyas, Karmendriyas, Mahat, Manas, Buddhi, Chitta and Ahamkara.
- Saptadhatu that make the human body.

Pancha Kosha Theory.

- Critical analysis of the story of Bhrigu and Varuna.
- The existence of five koshas in the human body.
- The product of five koshas.
- Disturbance of each kosha.

MODULE 06

8L + 2T

Chakras & Mandalas.

- Introduction to Chakras.
- Evolution through the Chakras.
- Description of Muladhara, Swadhistana, Manipura, Anahata, Vishudhi, Bindubisarga, Ajna and Sahasrara Chakras.
- Concept of Mandalas, types and their work.

Vayus, Nadis & Swara Yoga.

- Concept of Vayus, type, their names and function.
- Concept of Nadis, their characteristics and the names of 10 major Nadis and their functions.
- Difference between Ida, Pingala and Sushumna.
- Effects of Swarayoga as explained in the Hatha yogic texts, Relevance of svara- vijnana in day to day life and the importance of Swarodaya in health and disease.

REFERENCE BOOKS:

1. Gore, M.M.: Anatomy and Physiology of Yogic practices (Kanchan Prakshan, Lonavala, 2003)
2. Sri Krishna: Notes on Structure and Functions of Human Body and Effects of Yogic practices on it (Kaivalyadhama S.M.Y.M Samiti, Lonavala, 1988)
3. Charu, Supriya: Sarir Rachana evam Kriya Vigyan.
4. Evelyn, C. Pearce: Anatomy and Physiology for Nurses (Faber and Faber Ltd. London, 1968)

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB

Syllabus of B. Sc. In Yoga (CBCS)

(Effective for 2020-2021 Admission Session)

5. Chatterjee, C.C.: Human Physiology (Vol. I & II) (Medical Allied Agency, Calcutta, 1992)
6. Swami Harshananda: The Six Systems of Hindu Philosophy (Ramakrishna Matt, Bangalore, 2000)
7. Dr H R Nagendra & Dr R Nagarathna: Yoga Health (Swami Vivekananda Yoga Prakashana, 2000)
8. Swami Muktibodhananda: Hatha Yoga Pradeepika, Yoga Publication Trust, Munger.
9. Karel Werner: Yoga and Indian Philosophy (Motilal Banarsidass, Delhi, 1979).
10. Radhakrishnan, S.: Indian Philosophy (Vol. I & II) (George Allen and Unwin, London, 1971)
11. Sharma, Chandradhar: A Critical Survey of Indian Philosophy (Motilal Banarsidass, Delhi, 2000)
12. Nagendra H R: Integrated Approach of Yoga Therapy for positive health, Swami Vivekananda Yoga Prakashana, Bangalore.
13. Swami Niranjanananda Saraswati: Prana, Pranayama & Pranavidya, Yoga Publication Trust, Munger.

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB

Syllabus of B. Sc. In Yoga (CBCS)

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COURSE: YOG-ABHYASA

COURSE OBJECTIVE:

The course is designed to provide an in-depth understanding of the asanas with reference from ancient texts and scriptures. The course also intends to enable the students to practically experience the importance of recitation of Vedic hymns, Vedic chanting & breathing techniques in yoga.

Sl	Course Outcome (CO)
1	Understand the Asanas with Textual Reference from Hatha Yoga Pradipika & Hatha Ratnavali.
2	Understand the Asanas with Textual Reference from Gheranda Samhita.
3	Understand the Asanas with Textual Reference from Shiva Samhita and Goraksa Samhita.
4	Understand the importance of Vedic chanting in yoga.
5	Skillfully recite the Vedic hymns.
6	Apply the understanding in breathing in yogic practice.

THEORY- BSY(T) 102

CO	Blooms Level	Modules	%age of questions
CO1	2,3	M1, M2	25
CO2	2,3	M3	25
CO3	2,3	M4	25
CO4	2,3	M5, M6	25
CO5	2,3		
CO6	2,3,6		
			100

PRACTICAL- BSY 192

CO	Blooms Level	Modules	%age of questions
CO1	2,3		
CO2	2,3		

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Syllabus of B. Sc. In Yoga (CBCS)
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CO3	2,3		
CO4	2,3		
CO5	2,3	M5, M6	50
CO6	2,3,6	M5, M6	50
			100

Credits- 4L + 2P

MODULE01

10

Asanas with Textual Reference from Hatha Yoga Pradipika.

- Classification of asanas.
- Important asanas in the context of Kundalini awakening.
- Psychological, Physiological and Spiritual aspects of selected asanas with reference to Hatha yoga pradipika.
- Commonalities of asanas with other texts.

MODULE02

10

Asanas with Textual Reference from Hatha Ratnavali.

- Classification of asanas.
- Important asanas in the context of Kundalini awakening.
- Psychological, Physiological and Spiritual aspects of selected asanas with special reference to Hatharatnavali.
- Commonalities of asanas with other texts.

MODULE03

10

Asanas with Textual Reference from Gheranda Samhita.

- Classification of asanas.
- Important asanas in the context of Kundalini awakening.
- Psychological, Physiological and Spiritual aspects of selected asanas with special reference to Gheranda Samhita.
- Commonalities of asanas with other texts

MODULE04

10

Asanas with Textual Reference from Shiva Samhita and Goraksa Samhita.

- Classification of asanas.
- Important asanas in the context of Kundalini awakening.
- Psychological, Physiological and Spiritual aspects of selected asanas with reference to Shiva Samhita and Goraksa Samhita.
- Commonalities of asanas with other texts.

MODULE05

15

- Vedic Chanting.
- Dasha Shanti.

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB

Syllabus of B. Sc. In Yoga (CBCS)

(Effective for 2020-2021 Admission Session)

- Different Shanti Mantras from the Principal Upanishads
- Vriguvalli.
- Reading Specific Mantras and their Meanings

MODULE 06 Devotional Music.

15

- Introduction to Devotional Music
- Bhajanas, Dhuns, Namavalis, prayers and group singing of bhajanas.
- Bhajanas, Dhuns, Namavalis and Prayers Related to the Gods (Shiva & Krishna)

REFERENCE BOOKS:

1. Vasu RBSC.: The Gheranda Samhita (Munshiram Manoharlal Publishers Pvt.Ltd).
2. Vasu RBSC: The Siva Samhita, (Oriental Books Reprint Corporation, New Delhi.1979.
3. Mahayogindra S.: Hatha Rathnavalli, Sri M Ramkrishna Reddy
4. Swami Muktibodhananda Saraswati: Hatha Yoga Pradeepika, Yoga Publication Trust, Munger, Bihar, 1985.
5. Mantrapushpam , Ramakrishna Mission.
6. Vyasa Pushpanjali, Swami Vivekananda Yoga Prakashana, Bangalore, 2002.

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COURSE: ENGLISH COMMUNICATION

CODE: BSY 164

COURSE OBJECTIVE:

The course is designed to develop the student's communicative competence in English by giving adequate exposure in the four communication skills - LSRW - listening, speaking, reading and writing and the related sub-skills, thereby, enabling the student to apply the acquired communicative proficiency in social and professional contexts.

SI	Course Outcome	Mapped modules
1	Students will be able to Remember & Understand the basic concepts of the usage of English grammar & vocabulary in communication.	M1
2	Students will be able to Comprehend facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating the main ideas given in written texts.	M1,M2
3	Students will be able to Synthesise and Apply acquired linguistic knowledge in producing various types of written texts	M1, M3
4	Students will be able to Comprehend facts and ideas from aural inputs and Synthesise and Apply acquired linguistic knowledge in giving spoken response	M1, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Functional grammar & Vocabulary	2	10	1,2	
M 2	Reading Skills	2	20	1,2	
M 3	Writing Skills	8	40	2,3,4,	
M 4	Listening & Speaking Skills	8	30	2,3,4	
		20	100		

COURSE: ENGLISH COMMUNICATION

Code: BSY 164

Contact Hours / Week: 2L

Credits: 2

Module 1: Functional Grammar & Vocabulary: Tense: Formation and application; Affirmative / Negative / Interrogative formation; Modals and their usage; Conditional sentences; Direct and indirect speech; Active and passive voice; usage of common phrasal verbs, synonyms & antonyms. **1L + 1T**

Module 2: Reading Skills: Comprehension passages; reading and understanding articles from technical writing. Interpreting texts: analytic texts, descriptive texts, discursive texts; SQ3R reading strategy. **1L + 1T**

Module 3: Writing Skills: Writing business letters - enquiries, complaints, sales, adjustment, collection letters, replies to complaint & enquiry letters; Job applications, Résumé, Memo, Notice, Agenda, Reports – types & format, E-mail etiquette, advertisements **4L + 4T**

Module 4: Listening & Speaking

Listening: Listening process, Types of listening; Barriers in effective listening, strategies of effective listening

Speaking: Presentations, Extempore, Role-plays, GD, Interview. **4L + 4T**

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1. Bhatnagar, M & Bhatnagar, N (2010) Communicative English for Engineers and Professionals. New Delhi: Pearson Education.
2. Raman, M & Sharma, S (2017) Technical Communication. New Delhi: OUP.
3. Kaul, Asha (2005) The Effective Presentation: Talk your way to success. New Delhi: SAGE Publication.
4. Sethi, J & Dhamija, P.V. (2001), A Course in Phonetics and Spoken English. New Delhi: PHI.
5. Murphy, Raymond (2015), English Grammar in Use. Cambridge: Cambridge University Press.