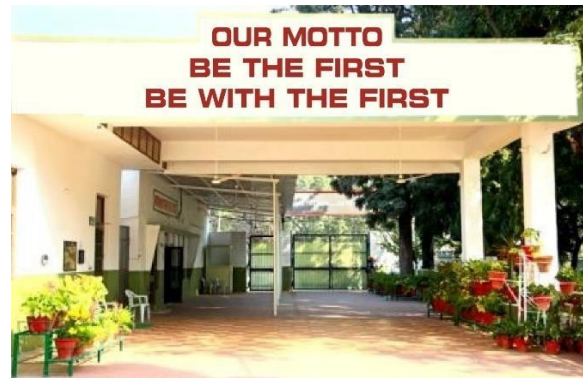




**GANDHI MEMORIAL NATIONAL COLLEGE  
AMBALA CANTT.**

**(Affiliated to Kurukshetra University, Kurukshetra)**

**Add-on/Certificate Courses**



## **Add-On/Certificate Courses**

Keeping in view the market demand for skilled graduates in various fields, Gandhi Memorial National College, Ambala Cantt. introduces several Add-on/Certificate Courses for providing the students participative as well as skill-based education for increasing their employability prospects and preparing them to face the cutthroat competition in the outside world. Based on the analysis of students' feedback, IQAC of the college after detailed discussion with the Principal and Heads of the Departments proposes various Add-on/Certificate courses which are introduced in the college every year for the benefit of the students. The curriculum of these courses is designed in such a way that it provides the students detailed knowledge and skills required to perform real-world job responsibilities and further helps them perform confidently and efficiently at workplace.

## 2020-21

Sr. No.	Name of the Certificate Course	Course Code	Year of Offering
1.	Certificate Course in Solar Renewable Energy	SRECC-01	2021
2.	Certificate Course on Emotional Intelligence: A Key to Success	EICC-01	2021
3.	Certificate Course on Artificial Intelligence and Machine Learning	AIMLCC-01	2021
4.	Certificate Course on Vermicomposting of Bio-waste	VBCC-01	2021
5.	Certificate Course on Water Conservation	WCCC-01	2021
6.	Certificate Course on Vedic Sanskriti: Gita Ka Gyan	VSGGCC-01	2021
7.	Certificate Course in Physics: Introduction to Space Science	PSSCC-01	2021
8.	Certificate Course on Human Rights	HRCC-01	2021
9.	Certificate Course on Principle and Thoughts of Mahatma Gandhi	PTMGCC-01	2021
10.	Certificate Course in Vedic Mathematics	VMCC-01	2021
11.	Certificate Course on English Communicative Skills	ECSCC-01	2021
12.	Certificate Course in Yoga and Mental Health	YMHCC-01	2021
13.	Certificate Course on Selling Skills in Retail	SSRCC-01	2021
14.	Certificate Course in Video Production and Graphic Design	VPGDCC-01	2021
15.	Certificate Course in Tally.ERP9	TECC-01	2021
16.	Certificate Course in Business Skill Development	BSDCC-01	2021
17.	Diploma Course in Business Skill Development	BSDDC-01	2021
18.	Advanced Diploma Course in Business Skill Development	BSDADC-01	2021
19.	Certificate Course in Pharmaceutical Chemistry	PCCC-01	2021
20.	Diploma Course in Pharmaceutical Chemistry	PCDC-01	2021
21.	Advanced Diploma Course in Pharmaceutical Chemistry	PCADC-01	2021

# COURSE CONTENTS

## Vedic Mathematics

### Section I:

Introduction, historical and cultural aspects, vertically and crosswise sutra, algebraic products, addition and subtraction using the vinculum, multiplying with group of figures, decimal numbers, argumental division, reciprocals, squaring and square roots, combined arithmetic operations, sum of squares, combined addition and division

Evaluation of determinants, reducing the order of determinant, evaluation of determinant by row operations, evaluation of determinant by column operations, the solution of simultaneous linear equations, elimination of one and two variables.

### Section II:

Inversion of matrices, minors and co-factors, method to calculate inverse of matrices, curve fitting, exact curve fitting, regression, least squares quadratic regression of  $y$  on  $x$ , regression line of third degree, evaluation of logarithms and exponentials

Transformations of equations, Change of roots of equations, to obtain an equation with roots opposite in sign from given equation, equation with reciprocal roots, multiple roots, equation with increased roots by some value, equation with reduced roots.

### Section III:

Evaluation of sine and cosine functions for any angle, inverse sine, inverse cosine, inverse tangent function, hyperbolic functions, polynomial equations, equation with roots between 1 and -1, sine and cosine expansion series

Introduction to transcendental equations, solution of transcendental equations, cube roots, solution of cubic equations, solution of higher order equations.

### Section IV:

Introduction to functions, functions of polynomials, division of two polynomial functions, reciprocal of function, square root of function, cube root and fifth root, powers of function, natural logarithms and exponentials of polynomial, cosine and sine of polynomial, Function with two variables, square and square roots of bpolynomials, division, powers of  $P(x,y)$ , natural logarithms and exponentials of  $P(x,y)$ , sine and cosine of bpolynomial.

Introduction to differential equations, linear and non linear differential equations, degree and order of differential equations, solutions of linear and non linear differential equations, integro-differential equations, solution of integro-differential equations, Introduction to partial differential equations, solution of partial differential equations.

### Reference Books :

1. A.P Nicholas, K.R. Williams and J. Pickles; Vertically and Crosswise applications of the Vedic Mathematics Sutra, Inspiration Books Publication, 1984.
2. Swami Bharati krsna Tirthaji; Vedic Mathematics.

# **Certificate Course on Vermicomposting of Bio-waste**

## **Syllabus**

**Duration: 30 Hrs**

### **Unit: I**

#### **Introduction**

About Vermicomposting, Biotic & Abiotic, Requirement of Plants, Organic Compost vs Chemical Fertilizers

### **Unit: II**

#### **Types of Vermicomposting Methods**

Heap Method, Pit Method, Composting Bags Method, Open bed Method, Shape & Size of Pit

### **Unit: III**

#### **Miscellaneous**

Vermiwash, Cocoons, Earthworms, Nutrient enriched vermicomposting

#### **Reference books:**

1. Bhatt J.V. & S.R. Khambata (1959) "Role of Earthworms in Agriculture" Indian Council of Agricultural Research, New Delhi
2. Dash, M.C., B.K.Senapati, P.C. Mishra (1980) " Verms and Vermicomposting" Proceedings of the National Seminar on Organic Waste Utilization and Vermicomposting Dec. 5-8, 1984, (Part B), School of Life Sciences, Sambalpur University, Jyoti Vihar, Orissa.
3. Edwards, C.A. and J.R. Lofty (1977) "Biology of Earthworms" Chapman and Hall Ltd., London.
4. Lee, K.E. (1985) "Earthworms: Their ecology and Relationship with Soils and Land Use" Academic Press, Sydney.

**DEPARTMENT OF CHEMISTRY**  
**CERTIFICATE COURSE**  
**WATER CONSERVATION**  
**Session 2021-2022**

**Course Syllabus**

**Course Duration: 30 hours**

Unit 1: Air and Water Chemistry

Chemistry of acid rain, Ozone chemistry and ozone layer depletion, role of CFCs in ozone depletion. Physicochemical properties of water; alkalinity and acidity of water, hardness of water, solubility of gases in water, metal complex formation and chelation; heavy metals in water.

Unit 2: Properties of Water

Physical: temperature, colour, odour, total dissolved solids and total suspended solids; hydrological cycle; precipitation, runoff, infiltration, evaporation; Chemical: major inorganic and organic constituents, dissolved gases, DO, COD, BOD.

Unit 3: Rain Water Harvesting and Conservation

Techniques for ground water recharge; river structure and patterns; watershed and drainage basins; importance of watershed and watershed management; rain water harvesting in urban settings; Conservation Techniques.

Unit 4: Water Budgeting:

Introduction to surface and ground water; surface and ground water pollution; water table; vertical distribution of water; formation and properties of aquifers;

Reference Books:

1. Mays, L.W. 2006. Water Resources Sustainability. The McGraw-Hill Publications.
2. Forinash, K. 2010. Foundation of Environmental Physics. Island Press.
3. Pani, B. 2007. Textbook of Environmental Chemistry. IK international Publishing House.

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**Certificate Course**

**VIDEO PRODUCTION & GRAPHICS DESIGN**

SESSION-2021-22

**SYLLABUS**

**PRACTICAL BASED**

**Duration -30 hours**

**UNIT-1**

**GRAPHICS DESIGN**

1. GRAPHICS DESIGN & SOFTWARE'S BASIC TOOLS.
2. THUMBNAIL MAKING
3. POSTER (FILM) MAKING
4. PICTURES EDITING

## **Unit-2**

### **VIDEO SHOOT (MOBILE & CAMERA).**

1. CAMERA TECHNIQUE. (Camera angle & Camera shots)
2. CAMERA SETTING. (ISO, SHUTTER SPEED, APERTURE)
3. SHOOT.
4. BASIC VIDEO EDITING. (SEQUENCE MAKING, VIDEO CUTTING, EFFECTS , PROJECT MAKING, SAVE & EXPORT,)

## **UNIT-3**

### **SOCIAL MEDIA PROMOTION**

1. SOCIAL MEDIA PLATFORMS.
2. FACEBOOK & FACEBOOK PAGE CREATION
3. YOUTUBE CREATE & VIDEO UPLOADING WITH SETTING.
4. INSTAGRAM PROMOTION & TAG.

## **UNIT-4**

### **PROJECT FILE (PRACTICAL)**

1. MOBILE FILM MAKING.
2. POSTER MAKING.
3. FILM PROMOTION BY SOCIAL MEDIA

## वैदिक संस्कृति- गीता का ज्ञान

### पाठ्यक्रम की रूपरेखा और पाठ्यक्रम

विषय क्रमांक (Course code)	कोर्स का नाम (Course name)	पाठ्यक्रम की अवधि (Duration of the course)	अधिकतम अंक (Maximum marks)	परीक्षा की अवधि (Duration of exam)	निर्देश का माध्यम (Medium of instruction)
	वैदिक संस्कृति- गीता का ज्ञान	30 घंटे	कुल अंक : 100 (40+30+30)  योग्यता अंक : 40	3 घंटे	हिन्दी

पाठ्यक्रम निम्न सत्रों का गठन करेगा जैसा कि नीचे दिखाया गया है :-

#### ❖ यूनिट-1

- वैदिक संस्कृति- परिचय
- आर्यों का मूल निवास स्थान
- वैदिक काल का विभाजन

#### ❖ यूनिट-2

- ऋग्वैदिककालीन साहित्य
- ऋग्वैदिक काल एवं उत्तर वैदिक काल से संबंधित महत्वपूर्ण तथ्य
- वेदों में नारी का महत्व

#### ❖ यूनिट-3

- भगवद्गीता के अनुसार शिक्षा
- कर्म योग की परिभाषा
- गीता में कर्म योग
- गीता में ज्ञान मार्ग

#### ❖ यूनिट-4

- गीता में निहित नेतृत्व के गुण
- गीता का प्रतिपाद्य एवं आधुनिक संदर्भ
- परिभ्रमण- धर्मक्षेत्र कुरुक्षेत्र परिभ्रमण



• संदर्भ पुस्तके :-

- ❖ वैदिक संस्कृति का इतिहास, डॉ. कीथ
- ❖ श्रीमद्भगवद्गीता, गीता प्रेस गोरखपुर
- ❖ श्रीमद्भगवद्गीता, विनोबा भावे
- ❖ गीता रहस्य, लोकमान्य तिलक

**Certificate Course in 'Selling Skills in Retail'**

**Syllabus**

**Duration : 30 hours**

MODULE -1 Introduction to retailing, concepts in retailing, organised and unorganised retail. Growth of Retail sector in India

MODULE -2 Basics of sale, Importance of selling. Qualities of an effective sales person. Concept of selling. Art of prospecting, art of conversion, basic etiquettes and mannerism.

MODULE -3 Role of product knowledge in the selling. Knowledge of market trends and competition. Art of objection handling. Role of ethics in selling.

MODULE -4 Billings counter management, display management, collection of customer information, inventory management.

**MODULE-5 ON THE JOB TRAINING**

Suggested Readings:

1. Kati, Sumit. Retail Selling Skills, Himalaya Publishing House Pvt. Ltd.
2. Pradhan, Swapna. Retailing Management, Tata McGraw-Hill Publishing company Ltd.
3. Gilbert, David. Retail Marketing Management, Pearson Education.
4. Sheikh, Arif.Fatima,Kaneez. Retail Management, Himalaya Publishing House Pvt. Ltd.

## CERTIFICATE COURSE

### ARTIFICIAL INTELLEGEENCE & MACHINE LEARNING

Course Syllabus

Course Duration: 30 hours

#### UNIT I

**Artificial Intelligence:** - Introduction to Artificial Intelligence, Understanding of the historical evolution of Artificial Intelligence, Components of AI, Identification of the characteristics of an intelligent system/agent, Turing Test and Advanced Turing test

#### Unit-II:

**Artificial Intelligence Domains:** - Data Science, Computer Vision, NLP

**Expert System:** Components of Expert System: Knowledge Base, Inference Engine, User Interface, Features of Expert System, Expert System Life Cycle, Categories of Expert System, Rule Based vs. Model Based Expert Systems, Advantages/Limitations of Expert System, Developing an Expert System: Identification, Conceptualization, Formalization, Implementation, Testing, Using an Expert System, Application Areas of Expert System.

#### Unit-III

**Machine Learning:** - About Machine learning, Applications of ML, Real World Examples of Machine Learning

**Natural Language Processing:** Introduction, Need, Goal, Fundamental Problems in Natural Language Understanding, How People overcome Natural Language Problems

**Types of Machine learning:** - **Supervised learning** (parametric/non-parametric algorithms, support vector machines, kernels, neural networks).

**Unsupervised learning** (clustering, dimensionality reduction, recommender systems, deep learning).

**Reinforcement learning**

#### Unit-IV

Best practices in machine learning, innovation process in Machine learning and AI).

References:-

1. Russell, S. y Norvig, P.: "Artificial Intelligence, a modern approach", Ed. Prentice Hall, 1995

2. Nilsson, N.J.: "Artificial Intelligence, a new synthesis", Ed. Morgan Kaufmann Publishers, 1998
3. Christopher Bishop, "Pattern Recognition and Machine Learning, illustrated Edition, Springer, 2006"

## **CERTIFICATE COURSE IN TALLY.ERP**

**Duration:30 hours**

### **Syllabus**

#### **Module 1**

**Duration: 10 Hrs**

**Chapter I** Fundamental of Accounting

**Chapter II** Maintaining Chart of Accounts in Tally.ERP 9 **Chapter**

**III** Maintaining Stock Keeping Units (SKU) **Chapter IV** Recording

Day-to-Day Transitions in Tally.ERP 9

#### **Module 2**

**Duration: 10 Hrs**

**Chapter V** Accounts Receivable and Payable Management

**Chapter VI** MIS Reports

**Chapter VI** Recording Vouchers with TDS

#### **Module 3**

**Duration: 10 Hrs**

**Chapter VIII** Recording Vouchers with TDS (Tax Deducted at Source)Goods and Services Tax (GST) – Introduction

Shortcut Keys Practice

# **Certificate Course in Solar Renewable Energy**

**Duration:30 hours**

## **UNIT -I**

Introduction, Definition of Power and energy, difference between power and energy, the role of energy in development, Limitation of renewable energy sources their usefulness seasonal nature, requirement, need for the use of new energy sources.

## **UNIT-2**

Conventional energy sources Hydro Electric, Thermal, Nuclear, Non-Conventional Energy sources Biomass, geo-thermal, solar, wind energy, ocean energy, wave energy, advantages and disadvantages, challenges.

## **UNIT 3**

Commercial energy sources, fosial-fuels coal, oil, natural gas, hydroelectric power, nuclear, Non- commercial energy sources, wood, animal wastes, agricultural waste, cost of raw materials, transport problems, issues

## **UNIT 4**

Solar system: Energy from the sun, solar window, atmospheric effects, diffused radiations, Air mass, effect of Air Mass, seasonal effects, environmental effects on standard test conditions.

### **Reference**

- Renewable energy; power for a sustainable future; oxford; Stephen peake; oxforduniversity press- 2017
- Renewable energy systems; Devid M, Buchla, Thomas E kissell, Thomas, L Floyd;Pearson India Education Services Pvt. Ltd. 2017
- Fundamentals of Renewable Energy Systems Paperback – D.Mukherjee, New AgeInternational Publisher; First edition (2011)

## **CERTIFICATE COURSE ON BUSINESS SKILL DEVELOPMENT**

**THEORY-40MM**

**PRACTICAL-60MM**

### **Unit-I**

#### **COMMUNICATIVE GRAMMAR**

**A. Lexis: -**

Idioms & Phrases, one word substitute, Spotting errors, Para jumbles, confused words, comprehensives.

**B. Communication: -**

Introduction to verbal and nonverbal communication

Principles of effective communication-Effective listening

### **UNIT-II**

#### **WRITTEN COMMUNICATION**

A. Writing skills, Dialogue writing, Interpreting Pictures.

B. Technical writing

Business Letters

E-mail Writing.

#### **PRACTICAL PAPER**

**MM-60**

Developing Speaking & Listening Skills Through

1. Role Play Activities
2. Practicing Short Dialogues
3. Group Discussions
4. Debates
5. Speeches/Extempore
6. Listening to News Bulletin
7. Viewing & Reviewing TV Programmes.

# **SYLLABUS**

## **Diploma Course in Business Skill Development**

### **Syllabus is divided into two parts**

Theory: 40 marks

Practical: 40 Marks

#### **Theory**

M.M – 40

- A. Business Communication – Its Forms, Practices
- B. Self-Development & Communication
- C. Effective Presentation Skills – Verbal & Non – Verbal

#### **Practical**

M.M – 60

Developing speaking & listening skills through

- 1) Group Discussion
- 2) Debate
- 3) Extempore
- 4) PPT Presentation
- 5) Interview
- 6) Management Games

# SYLLABUS

## Advanced Diploma in Business Skill Development

### Syllabus is divided into two parts

Theory: 40 marks

Practical: 40 Marks

#### Theory

M.M – 40

**Note:** Four questions of ten marks each. All questions shall be compulsory

- A. Writing Skills: Paragraph Writing, Report Writing, Letter Writing, E-Mail Writing
- B. Listening Skills: Emphasis will be placed on Effective Listening Skills.
- C. Interview Skills: Emphasis shall be laid on facing the interview

#### Practical

M.M – 60

Developing speaking & listening skills through

1. Role Playing Activities
2. Group Discussions
3. Debates
4. Speeches / Extempore
5. Interview
6. Interpreting news reports

### Certificate Course on Introduction to Space Science

Duration: 30 hours

Unit 1:- Introduction to Planetary and Interplanetary Space:

Solar System, Kepler's Laws, Earth-Moon System, Exploration of Solar System by Telescopes, Rockets and Satellites.

Unit 2:- Structure of Earth's Atmosphere:

Lower, Middle and Upper Troposphere (0-10 km), Stratosphere (10-50km), Ionosphere (50-1000 km), Protonosphere (10,000 to 60,000 km towards sun), Interplanetary space (Beyond 60,000 km towards the sun).

Unit 3 : - Asteroids, Meteors, Comets and Galaxies: Asteroids: Discovery and designation, Origin, Nature and Orbits of Asteroids. Meteors : Meteor showers and sporadic meteors. Comets: Periodic comets, Earth as a Magnetic Comet

Unit 4: - Fundamental Particles and basic forces:

Protons, Electrons, Neutrons, Neutrinos, Mesons, leptons, and quarks. The concept of Basic forces viz., strong, weak, electromagnetic and gravitational forces.

**Reference Books:**

1. Ionospheric Radio Propagation by Kenneth Davis. National Bureau of Standards Monograph 80 (1965), US Government Printing office, Washington D.C.
2. Physics of the Upper Atmosphere edited by J, A. Ratcliffe, Cavendish Laboratory, University of Cambridge. Academic Press New York and London (1960)
3. Source book on the Space Sciences - Samuel Glasstone, Princeton, New Jersey.
5. The Upper Atmosphere - S K Mitra

**CERTIFICATE COURSE ON ENGLISH COMMUNICATIVE SKILLS**

**SYLLABUS**

**Duration: 30 hours**

**Unit I –Basic Grammar, Vocabulary and Word Formation** - Parts of Speech and their function in spoken and written language, Tense, Articles, Learning vocabulary with the help of root words, Formation of new words by adding Prefixes and Suffixes.

**Unit II – Speaking Skills** – Practicing English Conversations - Introducing Yourself, Introducing Another Person, Meeting a Person First Time, Asking for a Way and Giving Directions, Giving a Message on Phone, Apologizing, Making a Request, At the Bookshop, Accepting an Invitation, Declining an Invitation, Appreciating Something, Ordering a Meal at the Hotel, Attending an Interview for a Job.

**Unit III –Essentials of Spoken English** – Idiomatic Expressions, Words Often Mispronounced, Examples of Problem Words with their Incorrect and Correct Usage.

**Unit IV – Writing Skills** – Writing Applications, Notices, E – mails, CV writing.

**Course Objectives:**

- To develop the basic reading and writing skills of learners.
- To help learners develop their listening skills, which will, enable them to listen to lectures and comprehend them by asking questions
- To help learners develop their speaking skills and speak fluently in real context.
- To help learners in building vocabulary of a general kind by developing their Reading skills.

**Course Outcomes:** On successful completion of the course, the students will be able to

- develop their reading, writing, listening and speaking skills
- improve their speaking ability in English both in terms of fluency and comprehensibility
- give oral presentations and receive feedback about their performance
- improve their reading fluency skills through extensive reading
- enlarge their vocabulary by keeping a vocabulary journal
- strengthen their ability to write different types of applications, CV, emails, notices, etc.



## Suggested Readings

Collins, Beverley, and Inger M. Mees. *Practical Phonetics and Phonology: A Resource Book for Students*. Routledge, 2013.

Gangal, J. K. *A Practical Course in Spoken English*. PHI Learning Pvt. Ltd., 2012.

Lewis, Norman. *Word Power Made Easy*. W.R.Goyal Publishers and Distributors. Delhi, 2007.

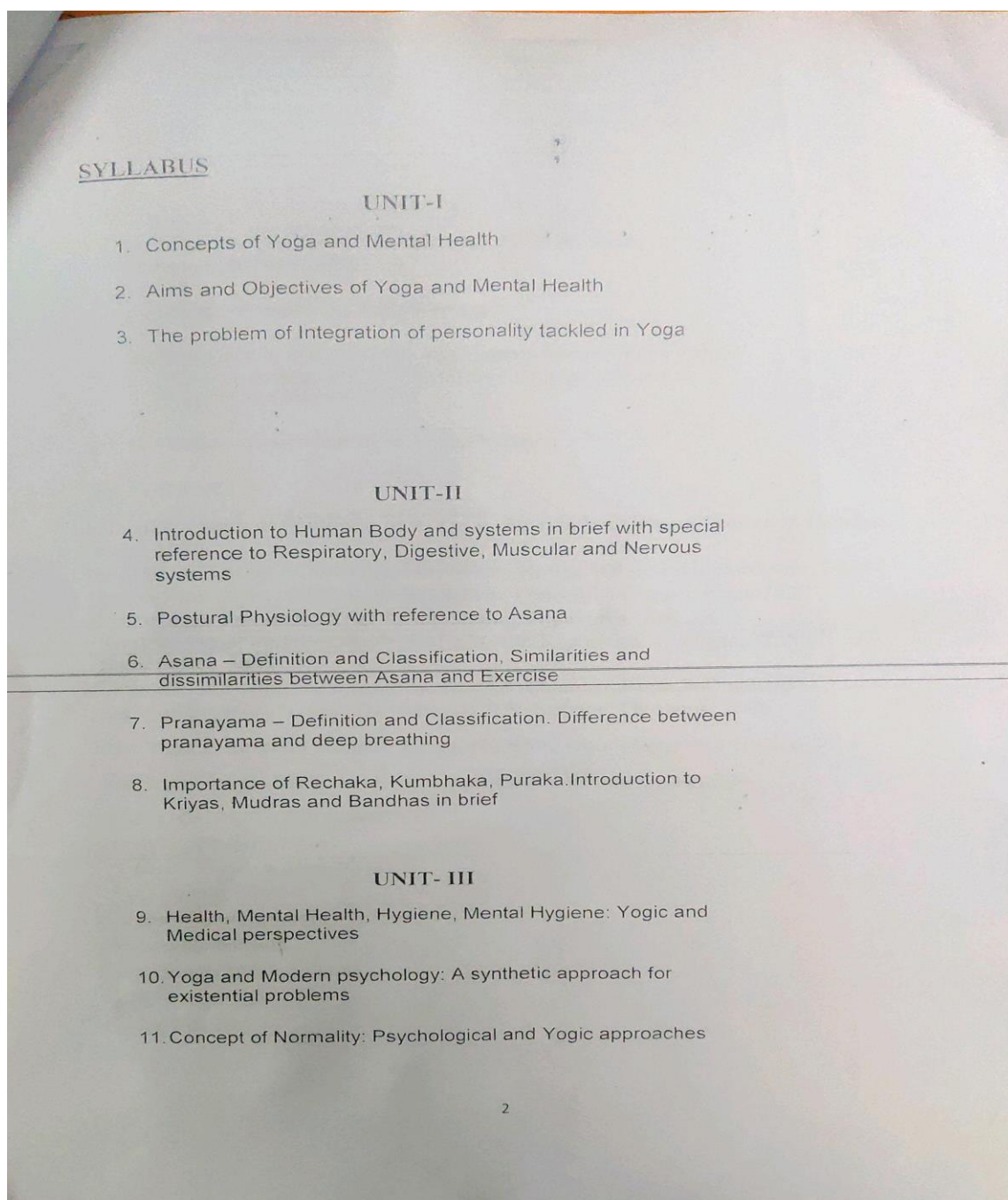
Nesfield, John Collinson. *Manual of English Grammar and Composition*. Macmillan, 1912.

Sinha, Anjani K. *Empowering Communication Skills*. Shipra Publications, Delhi, 2016.

Varshney, K.L. *Linguistics and Phonetics*. Student Store, Bareilly, 2004-2005.

## Certificate Course on Yoga and Mental Health

**Duration: 30 hours**



#### UNIT- IV

12. Emotional Disorders: Causes, effects and remedies in Patanjala Yoga Sutra
13. Conflict, Frustration: Yogic Remedies
14. Personal and interpersonal Adjustments through Yoga. Yamas, Niyamas, Asanas and Pranayamas – their contribution to Physical and Mental Health
15. Prayer – its significance in Yogic Practices.

#### REFERENCES:

- The Yoga Sutra of Patanjali, M.R.Yardi, Bhandarkar Oriental Research Institute, Pune, 1979
- Outlines of Indian Philosophy, Hiriyanna, Motilal Banarsidass Publisher, 2014
- Indian Philosophy, Dr S. Radhakrishnan, Oxford University Press 1923
- Hatha Yoga Pradipika, Yogi Swatmarama, Yogavidya.com, 2002
- Yoga Sutras of Patanjali, Sadhana Pada with Exposition of Vyasa, Motilal Banarsidass, 2002
- Introduction to Indian Philosophy, Dutta & Chatterji, Rupa & Co, 2015
- Light of Yoga (on Yama – Niyama), B.K.S. Iyenger, Thorsons, 2006
- The Yoga system of Patanjali, James, Houghton, wood, Forgotten Books, 2018
- Science of Yoga, I.K.Taimni, Theosophical Publishing House, 2007

#### END COURSE ASSESSMENT:

- (i) Practical Test
- (ii) Written Test

#### Course Coordinator:

Dr. Seema Kansal  
Department of Economics  
G.M.N. College  
Ambala Cantt

# CERTIFICATE COURSE IN PHARMACEUTICAL CHEMISTRY BASED ON AYURVEDA

Certificate Course in Pharmaceutical Chemistry  
Based on Ayurveda  
(Add on Course for B.A/B.Sc/B.Com) Examination Scheme for year 2019-20

1<sup>st</sup> year Pharmaceutical Chemistry based on Ayurveda Certificate Course

Total Theory	Practical Marks	Total Marks
100	100	200

Subject: Certificate Course in Pharmaceutical Chemistry based on Ayurveda  
(Theory)

Certificate Course

प्रथम इकाई 1 आयुर्वेद के मूलभूत आधार

2 औषधीय रसायन शास्त्र संक्षिप्त परिचय

द्वितीय इकाई द्रव्य गुण विज्ञान

**Books Prescribed: 1. Original Texts**

1. चरकसंहिता
2. रसार्णवः
3. रसकल्पः
4. रसकषायवैद्यकम्

**2. Resource Books:**

1. यजुर्वेद
2. अथर्ववेद
3. अर्कप्रकाशः
4. योगशुद्धिनिधिः

**Secondary Sources:**

1. Indian Tradition of Chemistry and Chemical Technology
2. History of Chemistry in Ancient and Medieval
3. A concise History of Science of India
4. Indian Science and Technology in the Eighteenth Century.

**Subject:** Certificate Course in Pharmaceutical Chemistry based on Ayurveda  
(Practical)

1. Pharmaceutical Preparation of Ayurvedic and Herbal Medicines.
2. Pharmaceutical Preparation of Perfumery based on Ayurveda.
3. Pharmaceutical Preparation of Cosmetics based on Ayurveda.

# DIPLOMA COURSE IN PHARMACEUTICAL CHEMISTRY BASED ON AYURVEDA

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**Diploma Course in Pharmaceutical Chemistry based on Ayurveda**  
2<sup>nd</sup> Year  
(Add on Course for B.A./B.Sc./B.Com)  
Examination Scheme for year 2019-20

Total Theory	Practical Marks	Total Marks
100	100	200

2<sup>nd</sup> Year Diploma Course in Pharmaceutical Chemistry based on Ayurveda

प्रथम इकाई शैषज्य शास्त्र के आधार भूत सिद्धांत  
द्वितीय इकाई शारीरिक संरचना ---आयुर्वेद एवं आधुनिक विज्ञान पर आधारित  
तृतीय इकाई द्रव्य गुण विज्ञान विस्तृत परिचय

**Books Prescribed:**

1.	रसरत्नाकर
2.	रसेन्द्रचूडामणि
3.	रसनक्षत्र मालिका
4.	रसकाषाय वैद्यकम्

**Resource Books:**

1.	सुश्रुत संहिता
2.	चरकसंहिता
3.	कौटिल्य अर्थशास्त्र
4.	अथर्ववेद

**Secondary Source:**

1. A concise History of Science of India
2. Indian science & Technology in the Eighteenth century
3. Sanskrit & Science
4. Science in Sanskrit

**Subject:** Diploma Course in Pharmaceutical Chemistry based on Ayurveda Prac

1. Equipments used in preparation of Pharmaceutical material.
2. Methods of manufacturing the medicines.

# ADVANCED DIPLOMA COURSE IN PHARMACEUTICAL CHEMISTRY BASED ON AYURVEDA

20

**Advance Diploma in Pharmaceutical Chemistry based on Ayurveda**  
**3<sup>rd</sup> Year**  
**(Add on Course for B.A/B.Sc./B.Com)**  
**Examination Scheme for year 2019-20**

Total Theory	Practical Marks	Total Marks
100	100	200

प्रथम इकाई औषधीय रसायन शास्त्र (अकार्बनिक) परिचय  
द्वितीय इकाई औषधीय रसायन शास्त्र (कार्बनिक)  
तृतीय इकाई रस शास्त्र  
चतुर्थ इकाई हर्बल पदार्थ परिचय एवं निर्माण  
पंचम इकाई मानवीय मूल्य एवं व्यावसायिक आचार-नीति।

**Books Prescribed: 1. Original Texts**

1. रसकामधेनुः
2. दिव्यरसन्द्रसारः
3. रसायनशास्त्रोद्घृतिः

**Resource Books:**

1. महाभारतम्
2. सुश्रुतसंहिता
3. चरकसंहिता
4. कौटिल्य अर्थशास्त्रम्

**Secondary Source:**

1. संस्कृत में विज्ञान
2. A concise History of Science of India
3. Indian Tradition of Chemistry and Chemical Technology

**Subject:** Advance Diploma in Pharmaceutical Chemistry based on Ayurveda  
(Practical)

1. Ancient & Indian Method of Preparation of Perfumery
2. Preparation of Cosmetics – Oil, Paste, Lipsticks etc.

# CERTIFICATE COURSE IN HUMAN RIGHTS

Duration: 30 hours

## SYLLABUS

### UNIT-I

- |  |
|--|
| 1. Understanding Human Rights                                      |
| 2. Human Rights: Meaning and Development of International Concerns |
| 3. Civil and Political Rights                                      |
| 4. Universal Declaration of Human Rights                           |
| 5. Economic, Social and Cultural Rights                            |

### UNIT-II

- |   |
|---|
| 6. Specific Human Rights Food, Shelter and Health |
| 7. Right to Development                           |
| 8. Major Human Rights Conventions                 |
| 9. Right to Self-Determination                    |
| 10. Food, Shelter and Health Rights               |

### UNIT- III

- |                            |
|----------------------------|
| 11. Human Rights of Groups |
| 12. Rights of Minorities   |
| 13. Rights of Migrants     |
| 14. Child's Right          |
| 15. Women's Rights         |
| 16. Rights of Refugees     |

### UNIT- IV

- |   |
|---|
| 17. The U.N. Machinery: Charter               |
| 18. National Instructions and Laws            |
| 19. Treaty Bodies Regional Arrangements       |
| 20. Non-Governmental Organizations            |
| 21. Human Rights: Challenges of Globalization |
| 22. Human Rights Concerns and emerging trends |

### REFERENCES:

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Alston, Philip, and James Crawford, eds. *The Future of UN Human Rights Treaty Monitoring*. Cambridge University Press, 2000.

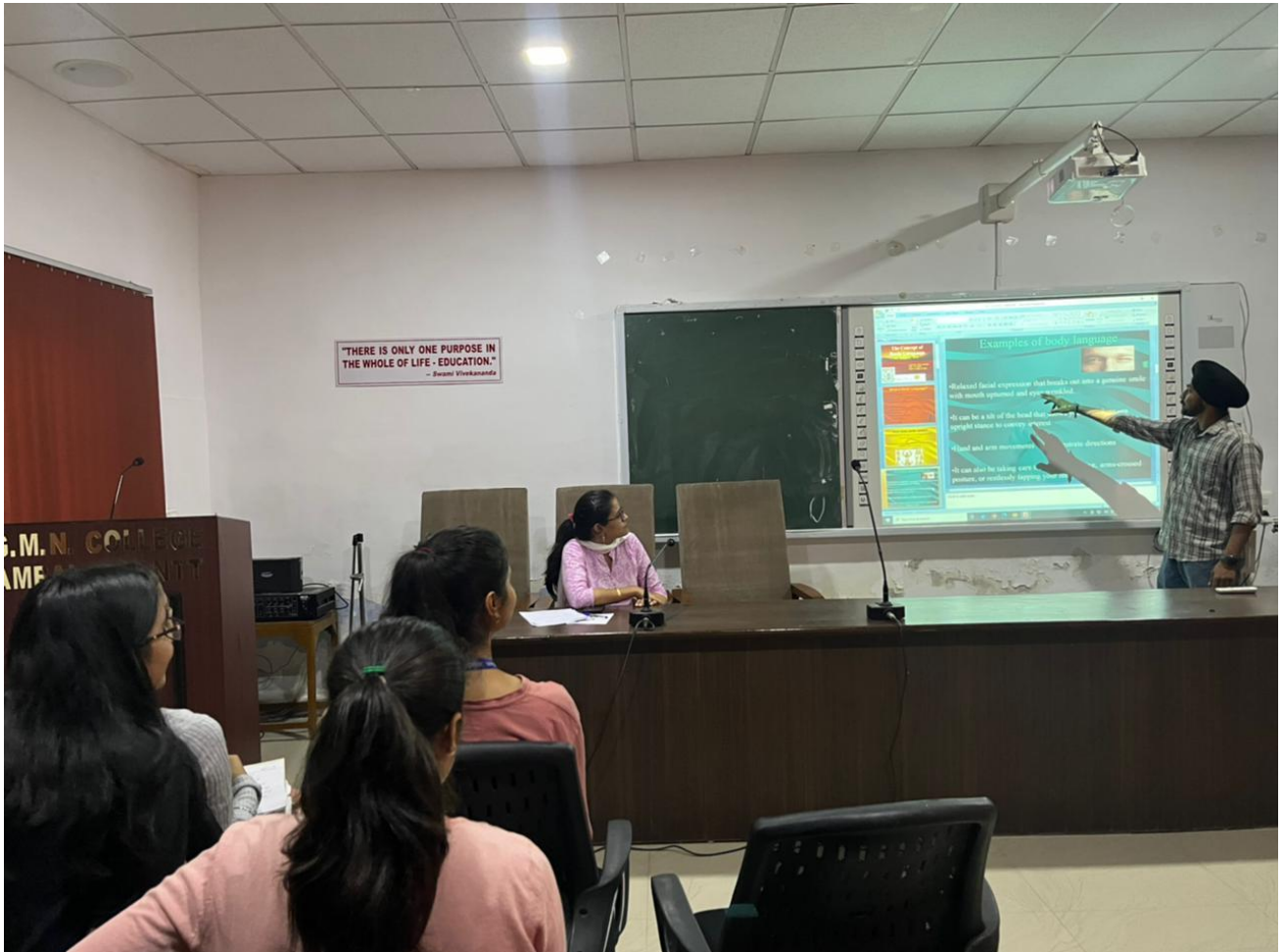
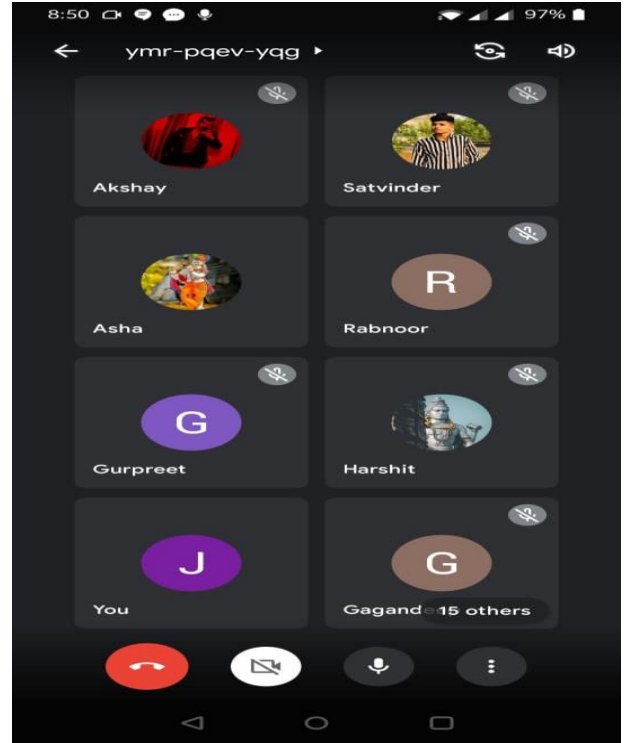
Alston, Philip, and Frederic Megret, eds. *The United Nations and Human Rights: A Critical Appraisal*. Second Edition. Oxford University Press, 2014.

Annan, Kofi. *The Circle of Empowerment: Twenty-five Years of the UN Committee on the Elimination of Discrimination Against Women*. Edited by Hanna Schopp-Schilling and Cees Flinterman. The Feminist Press at CUNY, 2007.

Bassiouni, M. Cherif, and William A. Schabas, eds. *New Challenges for the UN Human Rights Machinery: What Future for the UN Treaty Body System and the Human Rights Council Procedures?* Intersentia, 2011.

Bayefsky, Anne F. *The UN Human Rights Treaty System in the 21st Century*. Kluwer Law International, 2000.

Bayefsky, Anne Fruma. *How to Complain to the UN Human Rights Treaty System*. Martinus Nijhoff Publishers, 2003.





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**Principal**  
**G.M.N. College**  
**Ambala Cantt**