Re-Accredited by NAAC with 'A' Grade
VEER NARMAD SOUTH GUJARAT UNIVERSITY
University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.
વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી
યુનિવર્સિટી કેમ્પસ, ઉધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.
Tel : +91 - 261 - 2227141 to 2227146, Toll Free : 1800 2333 011, Fax : +91 - 261 - 2227312
E-mail : info@vnsgu.ac.in, Website : www.vnsgu.ac.in

-: પરિપત્ર :-

યુનિવર્સિટી સંલગ્ન તમામ સ્નાતક કોલેજોનાં આચાર્યશ્રીઓને જણાવવાનું કે, શૈક્ષણિક વર્ષ ૨૦૨૧–૨૨ થી અમલમાં આવનાર રાષ્ટ્રીય શિક્ષણ નીતિ–૨૦૨૦ ના અમલીકરણ અંગે જરૂરી નિર્ણયો/ ભલામણો કરવા વિજ્ઞાન વિદ્યાશાખા અને વિજ્ઞાન વિદ્યાશાખા અંતર્ગત તમામ અભ્યાસસમિતિની ઓનલાઈન જોઈન્ટ મીટીંગ તા.૧૫/૭/૨૦૨૧ની સભામાં ચર્ચા થયા બાદ રાષ્ટ્રીય શિક્ષણ નીતિ–૨૦૨૦ સદર્ભે વિજ્ઞાન વિદ્યાશાખા અંતર્ગત નીચે મુજબનાં જેનેરીક ઈલેકટીવ વિષયોનો અભ્યાસક્રમ તૈયાર કરવામાં આવેલ છે. જે અંગે વિચારણા કરતા એકેડેમિક કાઉન્સિની તા.૩૧/૦૭/૨૦૨૧ની સભાનાં ઠરાવ ક્રમાંકઃ૨૧ અન્વયે સ્વીકાર કરી સિન્ડિકેટને કરેલ ભલામણ સિન્ડિકેટે તેની તા.૧૧/૦૮/૨૦૨૧ની સભાના ઠરાવ ક્રમાંકઃ ૧૯ થી નીચે મુજબ મંજૂર કરેલ છે.તેની સંબધકર્તા શિક્ષકોને અને વિદ્યાર્થીઓને કરવી. તદઉપરાંત તેનો અમલ કરવો.

No.	Subject Name
1	Aquatic Algae Culture and uses
2	Population and Health
3	Health Policy and Planning
4	Health and Disease
5	Nutrition and Nutritional Importance
6	Elementary Statistics
7	Actuarial Statistics
8	Mathematical Modeling
9	Mathematical Methods
10	Introduction to Numerical Analysis
11	Introduction to FORTRAN 77
12	Public Health
13	Basic Health Care

એકેડેમિક કાઉન્સિલ તા.૩૧/૦૭/૨૦૨૧ની સભાનાં ઠરાવ ક્રમાંકઃ ૨૧

:: આથી ઠરાવવામાં આવે છે કે,રાષ્ટ્રીય શિક્ષણ નીતિ–૨૦૨૦ સદર્ભે વિજ્ઞાન વિદ્યાશાખા અંતર્ગત જેનેરીક ઈલેકટીવ વિષયોનો અભ્યાસક્રમ સ્વીકારી તે અંગે સિન્ડિકેટને ભલામણ છે.

સિન્ડિકેટની તા.૧૧/૦૮/૨૦૨૧ની બાબત ઠરાવ ક્રમાંકઃ ૧૯

:: આથી ઠરાવવામાં આવે છે કે, એકેડેમિક કાઉન્સિલ તા.૩૧/૦૭/૨૦૨૧ની સભાનાં ઠરાવ ક્રમાંકઃ (૨૧) થી કરેલ ઉપરોકત ભલામણ અન્વયેરાષ્ટ્રીય શિક્ષણ નીતિ–૨૦૨૦ સદર્ભે વિજ્ઞાન વિદ્યાશાખા અંતર્ગત સ્નાતક કક્ષાએ જેનેરીક ઈલેકટીવ વિષયોનો અભ્યાસક્રમ મંજૂર કરવો.

(બિડાણઃ ઉપર મુજબ)

ક્રમાંક : એકે./પરિપત્ર/૧૨૫૪૫/૨૦૨૧
તા.|૧૯–૦૮–૨૦૨૧

ઈ.ચા. કુલસચિવ

પ્રતિ,
૧)યુનિવર્સિટી સંલગ્ન તમામ સ્નાતક કોલેજોના આચાર્યશ્રીઓ.
૨)અધ્યક્ષશ્રી, તમામ વિદ્યાશાખા.
૩)પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ. ગુ. યુનિવર્સિટી, સુરત.

.....તરફ જાણ તેમજ અમલ સારૂ.

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યુનિવર્સિટી કેમ્પસ, ઉધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.
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E-mail : info@vnsgu.ac.in Website : www.vnsgu.ac.in

Dr. Gaurav Shah
Assistant Professor & Coordinator
Department of Biotechnology
Veer Narmad South Gujarat University, Surat.

No.: Biotech/259/2021

Date: 26/07/2021

To,
The Registrar,
Veer Narmad South Gujarat University,
Surat.

Kind Attention: Academic Section
Subject: Global Elective Syllabus

Respected Sir,
Please find attached Global Elective Syllabus named “Basic Health Care” proposed from Department of Biotechnology, Veer Narmad South Gujarat University, Surat.

I request your kind self to consider it for further approval in higher bodies of University and do the needful.

Thanking you.

Your’s faithfully,

(Gaurav Shah)
Coordinator
Department of Biotechnology
Veer Narmad South Gujarat University
Surat

Basic Health Care

1. Course Code and Title:

Course Code: **Course Title: Basic Health Care**

No. of Credits: 2
Subject: Global Elective
Faculty: All
Learning Hours/Week: 2
Course Type: Elective

2. Course Overview & Course Objectives:

This course is for all students who wants to learn fundamental concepts related to self care and care for others which gives them confidence to take immediate actions during emergencies. Basic health Care course orients learner to understand some important aspects to take care and steps in case of various types of health related emergencies.

Objectives:

-To understand basic concepts of First aid, this can help to society as well as own self.
-Person can deal with current emergency situation on quick base.
-Knowledge of First aid can save life or may give temporary relief to prevent worst situation in absence of health professional.
-It helps to realize moral duties and values.

3. Course Contents

Unit 1: Preparing to Help (First Aid)

1.1 First Aid Techniques
1.2 Aim and The Law
1.3 Dealing with an Emergency
1.4 Stress when giving First Aid and Resuscitation
1.5 Primary and Secondary Assessment
1.6 Hygiene and Hand Washing

Unit 2: Medical Emergencies

2.1 Heart, Blood Circulation, Shock
2.2 GI tract, Diarrhoea, Food Poisoning and Diabetes
2.3 Respiratory System and Breathing
2.4 Nervous System and Unconsciousness
2.5 Urinary System, Reproductive System and Emergency Childbirth
2.6 Senses, Foreign Bodies in Eye, Ear, Nose or Skin and Swallowed Foreign Objects

Unit 3: Injury Emergencies

3.1 Control of Bleeding
3.2 Burns: Thermal, Electrical and Chemical
3.3 Head, Neck and Back injuries
3.4 Minor Injuries: Nosebleed, Injured Tooth
3.5 Wounds
3.6 Bones, Joints and Muscles

Unit 4: Environmental Emergencies

4.1 Heat and Cold Emergencies
4.2 Bites and Stings
4.3 Poisoning and Poisonous Plants
4.4 Lightning
4.5 Emotional Considerations
4.6 Visits to Hospital

4. Course Learning Outcomes/Students Learning Outcomes (SLOs)

UNIT	SLOs
1. Preparing to Help (First Aid)	Students will able to learn about primary aid skills.
2. Medical Emergencies	Student will deal to handle present emergency situation with confidence.
3. Injury Emergencies	Students will develop basic skill which is needed to assess the ill or injured person.
4. Environmental Emergencies	Students will able to take logical decisions and shall be able to take appropriate immediate actions. Hospital visit is included for brief practical understanding and to visualize demonstration by expert regarding first aid.

5. Recommended Learning Resources

- Indian First Aid Manual (2016) 7th Edition, Indian Red Cross Society. https://www.indianredcross.org/publications/FA-manual.pdf
- Basic First Aid, Student book, version 8.0, American Safety and Health Institute, ISBN 978-1-936515-64-6, 1st Edition (2016) https://www.emcmedicaltraining.com/wp-content/uploads/2016/09/ashi-first-aid-student-book.pdf

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Veer Narmad South Gujarat University, SURAT

Public Health (Proposed syllabus)

Unit: I Introduction to Health.

- Definition & Concept of health: Biomedical, Ecological, Psychological & Holistic.
- Dimension of health, Positive health & concept of Well-being –PQLI, HDI.
- Determinants of health, Responsibility for health.
- Health development & indicators of health.
- Health Care & Health care system.

Unit: II Introduction to Diseases.

- Concept of disease, Types of disease, Concept of causation - Germ theory.
- Natural history of disease, Epidemiological triads: Agent, Host & Environment
- Concept of prevention, Mode of Intervention, Changing pattern of disease.
- Population medicine (Hygiene) – Public health & Community health.
- Infectious disease: Types, Dynamics of disease transmission, Mode of transmission.

Unit: III Epidemiology of Infectious & Non-communicable Disease.

- Causative agent, epidemiology, symptoms, treatment & prevention of TB, Measles, Chicken pox, Influenza, Diphtheria, Pneumonia, ARI, SARS.
- Cholera, Typhoid, Polio, Hepatitis, Acute Diarrhoeal Diseases & Tetanus.
- Amoebiasis, Ascariasis, Hook worm, Dengue, Malaria, Chikungunya, Encephalitis, Filariasis, Syphilis, Gonorrhea, AIDS, Rabies, Leptospirosis, Emerging disease
- Definition, Classification or types, Risk factor or cause & prevention of Coronary heart disease, Hypertension, Obesity, Diabetes & Cancer.

Unit: IV Disease Prevention & Control.

- Host defense & Immunity, Immunizing agent: Vaccine, Antisera & Immunoglobulins.
- Immunization schedule, WHO EPI schedule, adverse effects of immunization.
- Disease Prevention & Control, Control of reservoir.
- Disinfection, Types: Natural agent, Physical & Chemical agents.
- Health communication and health education.

Reference Books:

1. Park's Textbook of Preventive & Social Medicine by Park
2. Anatomy & Physiology for Nurses by Smith (ELBS)
3. Anatomy, Physiology & Health education by Rahul Phate (Career)
4. Review of Medical Microbiology by Jawetz & Melnick (Lange)
5. Microbiology, ninth edition by Prescott, Harley & Klein (McGraw-Hill)

Gmail

Academic VNSGU <academicvnsgu@gmail.com>

Global Elective Generic

1 message

Manish Tailor <mtailor21@gmail.com>
To: Academic VNSGU <academicvnsgu@gmail.com>

Sat, Jul 17, 2021 at 5:11 AM

Respected sir
Greetings. We are sending herewith the syllabus of Global Elective Generic for the students of B,A/B.COM in Mathematics. In This attachment we are preparing four papers.So kindly accept it if possible and do the needful.
Thanks for very much cooperation.

Your sincerely
Dr M R Tailor
Chairman
B O S Mathematics

GLOBAL ELECTIVE GENERIC-SYLLABUS-2021.pdf
617K

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
SYLLABUS FOR B.A. & B.COM (MATHEMATICS)
Global Elective Generic
Introduction to FORTRAN 77
Marks : 70 (20 internal+ 50 external)
(2 Hours / Week - Credits : 2)

Unit 1:

Flow charts and symbols, More flow charting examples.
FORTRAN language, character used in FORTRAN, FORTRAN constants, FORTRAN variable names, Type declaration for integer and real, Arithmetic expression (real and integer expressions), Hierarchy of operations in expressions, Examples of Arithmetic expression.

Unit 2:

Arithmetic statement, Mode of Arithmetic expression, Special function, examples of use of functions, Program preparation preliminaries. Input-Output statement, STOP and END statement, FORTRAN coding form, Simple FORTRAN program, FORTRAN programming examples.

Unit 3:

Input-Output statement, STOP and END statement, FORTRAN coding form, Simple FORTRAN program, FORTRAN programming examples. Control statements, Relational operators, Logical IF statement, Arithmetic IF statement, Block IF statement. Statement labels, GO TO statement, Example of use of Logical IF statement.

The course is covered by the following reference books :

1. V. Rajaraman : Computer Programming in FORTRAN 77, PHI.
2. V. Rajaraman : Computer Oriented Numerical Methods, PHI.
3. Dhaliwal, Agarwal and Gupta : Programming with FORTRAN 77, Wiley Eastern Ltd.
4. R. S. Salaria : Computer Oriented Numerical Methods, Khanna Book Pub. Co. Ltd.
5. R. Sirkar : FORTRAN based Algorithms, New Central Book Agency, Calcutta.
6. V. Krishnamurthy : FORTRAN based Algorithms, East-West Press, N.Delhi.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
SYLLABUS FOR B.A. & B.COM (MATHEMATICS)

Global Elective Generic

Introduction to Numerical Analysis*

Marks : 70 (20 internal+ 50 external)

(2 Hours / Week - Credits : 2)

Unit I:

Forward Differences, Backward Differences, Central Differences, Symbolic relation and separation of symbols, Differences of Polynomials.

Unit II:

Interpolation formulae : Newton's Forward and Backward Formulae, Gauss' Interpolation formulae.

Numerical Differentiation : 1st and 2nd order derivatives based on Newton's forward and backward difference interpolation formulae.

Unit III:

Numerical Integration : General Integration formula, Trapezoidal Rule, Simpson's 1/3-Rule, Simpson's 3/8-Rule.

The course is covered by the following reference books :

1. S. S. Sastry : Introductory methods of Numerical Analysis, Prentice-Hall of India Pvt. Ltd.; 5th Edition.
2. M. K. Jain, Iyenger, Jain : Numerical Methods for Scientific and Engineering Computations, New Age International Ltd.
3. Goel, Mittal : Numerical Analysis, Pragati Prakashan, Meerut.
4. Kaiser A. Kunz : Numerical Analysis, Mc Graw Hill Book Co., London.
5. James I. Buchanan, Peter R. Turner : Numerical Methods and Analysis, Mc Graw Hill Book Co., London.
6. P. C. Biswal: Numerical Analysis, Prentice-Hall of India, 2008.
7. H. C. Saxena : Finite Differences and Numerical Analysis, S. Chandand Co.,2005.

*Use of Scientific non – programmable calculator is allowed

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
SYLLABUS FOR B.A. & B.COM (MATHEMATICS)
Global Elective Generic
Mathematical Methods
Marks : 70 (20 internal+ 50 external)
(2 Hours / Week - Credits : 2)

Unit I:
Notations of finite difference calculus, Operators E, Δ, ∇, δ, Relations between different operators and their prosperities, Relation between difference and differential operators, Method of constructing difference tables, Finding the missing terms.

Unit II:
Factorial notation, Expression of polynomials in factorial notation by using finite differences, Method of unknown coefficients.

Unit III:
Difference equations : Order and degree of a difference equation, Solution of difference equations, Homogeneous difference equations with constant coefficients.

The course is covered by the following reference books :

1. S.S. Sastry : Introductory methods of Numerical Analysis, Prentice-Hallof India Pvt. Ltd.; 4th Edition.
2. M. K. Jain, Iyenger, Jain: Numerical Methods for Scientific andEngineering Computations, New Age International Ltd.
3. Goel, Mittal : Numerical Analysis, Pragati Prakashan, Meerut.
4. Kaiser A. Kunz : Numerical Analysis, McGraw Hill Book Co., London.
5. James I. Buchanan, Peter R. Turner : Numerical Methods &Analysis, McGraw Hill Book Co., London.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.
SYLLABUS FOR B.A. & B.COM (MATHEMATICS)
Global Elective Generic
Mathematical Modeling*
Marks : 70 (20 internal+ 50 external)
(2 Hours / Week - Credits : 2)

Unit I:
Mathematical modeling through ordinary differential equation of first order, Linear growth models; Linear decay models, Models for growth of Science and scientists.

Unit II:
Non-linear growth and decay models, Model of Logistic law of population, Spread of technological innovation, Spread of infectious diseases.

Unit III:
Mathematical models of geometrical problems through ordinary differential equation of first order, Simple geometrical problems, Orthogonal trajectories.

The course is covered by the following reference books :

1. J. N. Kapoor : Mathematical Modeling, New Age InternationalPublishers, New Delhi.
2. Kreysig : Advanced Engineering Mathematics, John Wiley, New York, 1999.
3. J. K. Sharma: OR Theory & Applications, Mac Milian India Ltd., 1998.
4. G. Hadley: Linear Programming, Narosa Publishing House , NewDelhi,1995.
5. G. Paria : Linear Programming, Transportation, Assignment, Game, Books& Allied Pvt. Ltd. Calcutta.

*Use of Scientific non – programmable calculator is allowed

PAPER: MAS – 204

ACTUARIAL STATISTICS

UNIT I:

- Basics of Probability & Interest: Theory of Interest, Variable interest rates, continuous time payment streams.
- Interest & Mortality: Annuities, Loan Amortization and Mortgage Refinancing, Mortality and Analytical models.

UNIT II:

- Life Tables: Concepts of Life Tables, Assumptions related to life tables, columns of life tables, Complete and Abridged life tables, Construction of life tables, Estimation from life table data.

UNIT III:

- Expected present values of payments, Continuous contracts & residual life, Premium calculations, m-payment net single premiums
- Population functions and indicator notations, Stationary population concepts

UNIT IV:

- Risk models: Proportional Hazard models, excess risk models, Multiple decrement models, death rate estimators, causes specific life insurance premiums.

REFERENCES

1. Barcley G.W. (1970). Techniques of Population Analysis. John Wiley, New York.
2. Borowiak, D.S., and A. F. Shapiro. (2013). Financial and Actuarial Statistics: An Introduction, Second Edition. CRC Press.
3. Donald, D.W.A. (1970). Compound interest and annuities, Second Edition, The Institute of Actuaries and the Faculty of Actuaries at the University Press.
4. Spurgeon, E.T. (2011), Life Contingencies, Third Edition, Cambridge University Press.
5. Eric V. Slud (2001): Actuarial Mathematics and Life Table Statistics (Mathematics Department, University of Maryland)

	First year course Elementary Statistics	
Unit-1:	**Collection of data :**	(10%)
	▪ Qualitative and quantitative data, ▪ Different types of scales: For attributes - Nominal and Ordinal, For variables - Ratio and Interval. ▪ Primary data and Secondary data	
Unit-2:	**Classification and Tabulation of data :**	(15%)
	➢ **Classification:** ▪ Meaning of classification, ▪ Types of classification, ➢ **Tabulation:** ▪ Meaning of tabulation, ▪ Guiding rules for tabulation, ▪ Essential parts of a statistical tables, ▪ Types of tables, ➢ Frequency distribution: Discrete and continuous frequency distribution, Cumulative frequency distribution, ➢ Bivariate frequency distribution: Discrete and continuous bivariate frequency distribution	
Unit-3:	**Diagrammatic and graphic presentation of data :** ➢ **Diagrams:** ▪ Introduction, ▪ Types of diagrams: Bar diagrams (simple, multiple, Simple sub-divided and percentage-divided),Circle diagram, Pie diagram.	(25%)

	➢ **Graphs:** ▪ Introduction, Graphs of frequency distributions: Histogram, Frequency polygon, Frequency curve, Cumulative frequency polygon, Cumulative frequency curve.	
Unit-4:	**Measures of central tendency and Measures of Dispersion :**	(50%)
	➢ Meaning of central tendency, ➢ Measures of central tendency: Mean, Median and Mode. ➢ Characteristic of an ideal measure of central tendency, ➢ Limitations of measure of central tendency, ➢ Meaning of dispersion, ➢ Measures of dispersion: Range, Mean deviation, Standard deviation, ➢ Characteristic of an ideal measure of dispersion, ➢ Variance, Coefficient of Variation.	

***

Gmail

Academic VNSGU <academicvnsgu@gmail.com>

Re: Science Faculty & All BOS Joint Meeting 15-07-2021

1 message

Mayuri <mayuridholariya@yahoo.com> Fri, Jul 16, 2021 at 1:18 PM
To: Academic VNSGU <academicvnsgu@gmail.com>

Respected Sir,
Sending some syllabus for Global elective papers as per the discussion in the meeting of 15th July .

Regards
Dr. Mayuri Dholaria
Chairman, BOS Medical Technology

On Monday, 12 July, 2021, 05:44:51 pm IST, Academic VNSGU <academicvnsgu@gmail.com> wrote:

Dear Sir/Madam , Kindly make it convenient to attend **Online** joint meeting of Faculty of Science & All Board of Studies on 2.30 pm., 15/072021. I/C. Registrar.

https://vnsgu-ac.webex.com/vnsgu-ac/j.php?MTID=mb4ca71ecf12c0f35a766915ab12febc6
Thursday, Jul 15, 2021 2:30 pm | 2 hours | (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi
Meeting number: 184 221 4491
Password: 123456

Please find the attachment file

4 attachments

Nutrition and Nutritional value.docx
16K

Health and disease.docx
17K

Health Policy and Planning.docx
16K

Population and Health.docx
16K

Health Policy and Planning

Course objectives

- To understand health systems and health policy making processes
- To understand the health planning from the perspective of national and global developments concerning health sector.

Unit 1: Understanding health policy and systems

1. Health systems – goals, elements and characteristics, multi-levels of operations, interactions and interrelationships
2. Health systems frameworks: six building blocks of health systems – Governance, Financing, Human resource
3. Overview of the health system in India, human resource
4. Health system development and strengthening
5. Health Policy and analysis – policy actors, focus and forms of policy analysis – policy analysis triangle

Unit 2: Health Planning

1. Definition of Planning, Health Planning Models
2. History of Planning in India
3. Development of National Health Policy: Evolution of Indian National Health Policies 1981-83, 2001 and 2017
4. Global agendas

   a. Health for all- Millennium Development Goals- Sustainable Development Goals
   b. Primary Health Care - Universal health coverage

REFERENCE BOOK:

1) National Health and Research Policy Documents
2) Expert Committee Report on Public Health Systems in India 1996
3) Collins, C., Green, A., 2014. Valuing Health Systems: A Framework for Low and MiddleIncome Countries. SAGE Publications.
4) Gupta, R.P., 2016. Health Care Reforms in India: Making Up for the Lost Decades. Elsevier India.
5) De Savigny, D., Adam, T., Policy, A. for H., Research, S., Organization, W.H., 2009. Systems Thinking for Health Systems Strengthening, Alliance Flagship report series. Alliance for Health Policy and Systems Research.
6) Gilson, L., Alliance for Health Policy and Systems Research, World Health Organization, 2012. Health policy and systems research: a methodology reader.

NUTRITION AND NUTRITIONAL IMPORTANCE

UNIT-1: Nutrition

1.1 Introduction
1.2 Nutrition and energy supply
1.3 Utilization of energy in man
1.4 Recommended dietary allowances (RDA)
1.5 Balanced diet
1.6 Nutritional disorder
1.7 Therapeutic diet
1.8 Nutritional status and clinical practice

UNIT-2: Nutritional Importance

2.1 Nutritional importance of carbohydrate
2.2 Nutritional importance of protein
2.3 Nutritional importance of lipid
2.4 Nutritional importance of fiber

UNIT-3: Vitamin

3.1 Introduction
3.2 Classification
3.3 Dietary source, daily requirements, biological function and deficiency manifestation of fat-soluble vitamin
3.4 Dietary source, daily requirements, biological function and deficiency manifestation of water-soluble vitamin

UNIT-4: Minerals

4.1 General function and classification
4.2 Biochemical function, dietary source, absorption and excretion and disease state of Calcium
4.3 Biochemical function, dietary source, absorption and excretion and disease state of Sodium
4.4 Biochemical function, dietary source, absorption and excretion and disease state of Potassium
4.5 Biochemical function, dietary source, absorption and excretion and disease state of Chloride

REFERENCES:

1) Satyanarayana U. & Chakrapani U. (2013). *Biochemistry*; 4th ed, Arunabha Sen and Allied (P) Ltd.

2) Vasudevan D. &Sreekumari S. (2005). *Textbook of Biochemistry*; 4th ed, Jaypee Pub
3) Chatterjae M. N. and Shinde R. (2007). *Textbook of Medical Biochemistry*, 7th ed., Jaypee Brothers Publishers.

Population and Health

Course objectives

- To familiarize students to the fundamentals of population studies and its links with health
- To impart practical knowledge and skills of demographic and health data sources and practical use of data Course outline

UNIT 1. Introduction to population and health:

Definition, scope, Concept of demography, Population components, Demographic transition theory

UNIT 2. Sources of demographic and Health data:

Population census, Vital registration system, Sample Registration System, National Family Health Survey (NFHS), District Level Health Survey (DLHS), Annual Health Survey(AHS), National Sample Survey Organization (NSSO) (demonstrate the practical use of the data and its advantages and limitations.)

UNIT 3. Population composition:

Levels and trends in the sex and age structure of the population of world and developed and developing countries

UNIT 4. Population projection:

Concepts, definition, determinants and measurement of fertility, mortality and migration, population projection

UNIT 5. Life tables:

Concept, importance and methods

UNIT 6. Population policy:

Population policy linkages with health issues

REFERENCE BOOK:

1) The Springer Series on Demographic Methods and Population Analysis: Ed.: Land, Kenneth C. "The Plenum Series on Demographic Methods and Population Analysis" Durham, NC 27708-0088, USA, 2014
2) Population Studies and Development from Theory to Fieldwork: Petit, Véronique (Ed.) Springer International Publication AG 2018
3) Handbook of Population: Ed. Dudley Poston and Michael Micklin. Springer publication, Edition one, 2006
4) Principles of population Studies: Asha Bhende and Tara Kanitkar, Himalaya Pub, Houses, Mumbai, 2011
5) The methods and Materials of Demography (Second edition): Siegel, Jacob S., and David A. Swanson,: Elsevier Academic Press, San Diego, 2004

HEALTH AND DISEASE

UNIT 1: Introduction to Health.

1.1 Concept of health, Definition, WHO definition.
1.2 Dimension of health, Positive health.
1.3 Determination of health.
1.4 Responsibility for health.
1.5 Health and development.

Unit: 2 Introduction to Diseases.

2.1 Concept of disease
2.2 Germ theory, Causative factors
2.3 Changing pattern of disease, New immerging diseases.
2.4 Types of infectious disease
2.5 Dynamics of disease transmission
2.6 Mode of transmission

Unit: 3 Infectious diseases (Causative agent, epidemiology, symptoms& prevention)

3.1 Air borne infection- TB, Pneumonia,COVID 19
3.2 Food & Water borne infection - Cholera, Typhoid, Food poisoning
3.3 STD - Hepatitis,AIDS
3.4 Parasitic infection - Amoebiasis, Malaria, Ascariasis

Unit: 4 Non-infectious diseases

4.1 Atherosclerosis
4.2 Diabetes Mellitus
4.3 Cancer

REFERENCE BOOK:

- Park's Textbook of Preventive & Social Medicine by Park
- Anatomy & Physiology for Nurses by Smith (ELBS)
- Text book of Medical Biochemistry by Chatterjee (Jaypee)
- Harper'sillustrated Biochemistry 26th edition (MacGraw-Hill)
- Microbiology. sixth edition by Prescott, Harley & Klein (McGraw-Hill)
- Microbiology by Pelzar, Chan &Kreig (Tata McGraw-Hill)
- Review of Medical Mierobiology by Jawetz& Melnick (Lange)
- Anatomy, Physiology & Health education by Rahul Phate (Career)
- Text book of Medical Biochemistry by Chatterjee (Jaypee)

Re-Accredited by NAAC with 'A' Grade
VEER NARMAD SOUTH GUJARAT UNIVERSITY
University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.
વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી
યુનિવર્સિટી કેમ્પસ, ઉધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.
Tel.: +91 - 261 - 2227141 to 2227146, Toll Free : 1800 2333 011, Fax : +91 - 261 - 2227312
E-mail : info@vnsgu.ac.in, Website : www.vnsgu.ac.in

NEP/AQB/Syllabus/ 3544 /2021 16/7/2021

From,
Dr. Kapila Manoj,
Pro & Head,
Dept. Aquatic Biology,
VNSGU,
Surat-395007

To,
The Registrar,
VNSGU,
Surat-395007

Sir,
In reference to notice number AC/Notice/9765/2021 on line meeting was held on 15th July 2021 at 2:30 p.m. As per instructions given by science faculty dean Dr. Bhavinbhai Naik herewith submitting the syllabus containing 30 hrs. and 2 credits. Do the needful and oblige

(Kapila Manoj)
HEAD
DEPARTMENT OF AQUATIC BIOLOGY
VEER NARMAD SOUTH GUJARAT UNIVERSITY
SURAT

Veer Narmad South Gujarat University

(Aquatic Biology)
NEP Related program

Teaching and Examination scheme

Theory Paper /Practical	Teaching schedule Hrs./week	Exam Schedule			Total marks	Credit
		Duration (Hrs.)	Internal marks	External marks		
Theory papers :						
AQB: 100 Aquatic Algae Culture and uses	30	2	30	70	100	2
Total	30	2	30	70	100	2

Veer Narmad South Gujarat University, Surat
Department of Aquatic Biology
(Aquatic Biology)
NEP Related program
AQB- 100: Aquatic Algae Culture and uses

Unit-I:
Hrs. 10
Aquatic algae Spirulina
Identification, Taxonomy/classification of economically important micro algae Distribution, morphology, reproduction, life cycle, growth physiology, Importance of *Spirulina*

Unit-2
Hrs. 10
Culturing
Culture techniques. Preparation of growth media (Cow dung ash, Cow urine, Rabbit excreta, poultry waste etc. Environmental Factors for growth

Unit-3
Hrs.10
Application
Application of spirulina in waste water treatment as bioremediation. Preparation of tablets /Capsules as health benefits

16/7/021

Reference:

- Lewis Hansard Tiffany (1968): Algae the Grass of many waters. Blackwell scientific publications Ltd., Oxford.
- Mathew, L. (1992): Introduction to Aquaculture, John Wiley and Sons, INC, New York
- Pillay, T.V.R. and Kutty, M.N. (2005): Aquaculture – Principles and Practices, Black Well Sciences, U.K.
- Round, F.E. (1981): The Ecology of the Algae, Cambridge University Press.
- Recent Advances in Micro algal Biotechnology (2016)Editor: Dr. Henri Gerken | Dr. Jin Liu | Dr. Zheng Sun |ISBN 978-1-63278-066-