FACULTY OF SCIENCE

SYLLABI

FOR

HEALTH CARE EDUCATION

NCC (NATIONAL COMPETEANCY CERTIFICATE-3 (LEVEL-5)

(SEMESTER SYSTEM)

EXAMINATIONS 2014-15

--:O:--
OBJECTIVES OF THE COURSE

• To demonstrate understanding of Anatomy, Physiology and Dietetics in relation to general healthcare.

• To develop understanding of basic principles of healthcare delivery services.

• To deal with the customers/patients efficiently in the area of healthcare.

• To efficiently support the health care personnel in looking after the patients/customers.

• To impart basic knowledge of Healthcare Services System.

• To be able to impart basic health education to the customers/patients.

• To communicate effectively with the customers/clients.

• To create an understanding of Healthcare Industry.

• To train a multi-skilled workers for the healthcare industry who can handle a number of jobs depending upon where he/she is posted in the hospital.

• This forms a good basic course for healthcare sector after which they can plan for vertical mobility to Diploma / Undergraduate courses.

• To provide a platform to identify advanced skills-based training in healthcare sector.

• To understand the principles of public health and have competency to implement National Health programmes in the Community.

• To be able to manage / implement Information, Education and Communication (IEC) activities in the community as per NRHM guidelines

JOB AVENUES

Pass out of this course can be good multi-skilled worker for the healthcare industry, who can handle a number of jobs in the following field

• General Duty Assistant in Hospital Sector and Nursing Sector

• Patient Care Coordinator in Hospital Sector

• Multi-Purpose Health Worker

• Community outreach Worker

• First Aid attendant
## DIFFERENT LEVELS OF NCC (NATIONAL COMPETENCY CERTIFICATE)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Certificate Levels (NCC) of NVEQF</th>
<th>Hours (Theory) As Per Details of NVEQF</th>
<th>Hours (Practical/Training/Skill Contents) As Per Details of NVEQF</th>
<th>Minimum Qualification Required</th>
<th>Equivalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Level-5 (NCC-3)</td>
<td>600</td>
<td>400</td>
<td>10 + 2 Science</td>
<td>Certificate</td>
</tr>
<tr>
<td>2</td>
<td>Level-6 (NCC-4)</td>
<td>550</td>
<td>450</td>
<td>NCC-I Certificate</td>
<td>Diploma</td>
</tr>
<tr>
<td>3</td>
<td>Level-7 (NCC-5)</td>
<td>300</td>
<td>700</td>
<td>NCC-II Certificate</td>
<td>Advanced Diploma / Associate Degree</td>
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</table>
The course module in health care is proposed at three levels of the NCC of NVEQF as per details:

**NATIONAL COMPETANCY CERTIFICATES (NCC-3 (LEVEL 5) HEALTH CARE)**

<table>
<thead>
<tr>
<th>Paper code</th>
<th>Subjects</th>
<th>Period / Week</th>
<th>Examination</th>
<th>Hrs</th>
<th>Total Marks</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Th</td>
<td>Pr</td>
<td>Total</td>
<td>Marks (Th)</td>
</tr>
<tr>
<td>1st Semester</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCC-01</td>
<td>Anatomy &amp; Physiology</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>90</td>
</tr>
<tr>
<td>NCC-02</td>
<td>Food Nutrition &amp; Dietetics</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>90</td>
</tr>
<tr>
<td>NCC-03</td>
<td>Core Skill: Communication and Computer Education in Health Care</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>90</td>
</tr>
<tr>
<td>2nd Semester</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCC-04</td>
<td>Health Care Delivery System, Hospital Organization &amp; Service</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>90</td>
</tr>
<tr>
<td>NCC-05</td>
<td>Training/Internship/field (Lab/Hospitals) visit</td>
<td></td>
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Remarks:

- Total marks : 800 marks
- For the courses in respect of said subjects, students have to be attached to hospitals, nursing homes, diagnostic centres for 8 (200 hours) weeks training / internship programme.
- Internal assessments 20% of the credits both theory and practical (50% on the basis of internal Exams and 50% on the basis of Pedagogic practices).
- Related Project Work.
- Total credits : 30 (one credit = 30 Hours)
First Semester

PAPER CODE (NCC- 01)       Total Marks- 150
ANATOMAY & PHYSIOLOGY       (Theory- 90 + Practical-60)

THEORY (MARKS-90)

Learning Objectives:

At the end of this course the learner must be able to understand Health Education regarding elementary knowledge about structure and functions of various organs and systems of human body and desirable skills regarding clinical parameters.

UNIT-I

General: Definition of Anatomy & Physiology; description of various regions of the body their structure and functions; elementary knowledge of cells and tissues of the body.

UNIT-II

Body System I: Elementary knowledge of Anatomy & Physiology of different organs & systems. Sense Organs – Eye, Ear, Nose, Tongue, Skin and Hair; Skeletal System - bone Structure & Types of bones, Joints & Muscles; Cardio Vascular System, blood pressure; Neurological system; Respiratory System, respiratory rate; Oral health.

Unit-III

Body System II: Lymphatic System; blood forming system; Digestive system; Immune system; Endocrine system (name of the endocrine organs, locations and functions); Reproductive system: Urinary systems.

Unit-IV

Concept of clinical laboratory tests; X ray, CT scan etc.

Practical (Anatomy & Physiology)       (Marks -60)

1. Identification of bones, joints and muscles using charts and slides and skeleton’s model; position and description of organs of body with the help of charts, models, skeleton

2. Measuring blood pressure (BP), pulse rate, respiratory rate, temperature, height, weight, BMI, anthropometric measurements along with the normal and abnormal values and their importance

3. Identifying blood components under microscope.

4. Anatomy & Physiology Record (every students has to make his/ her own record)

Books recommended:-

1. Chaurasia B.D., Human Anatomy, CBS Publishers & Distributors
2. Guyton and Hall, Textbook of Medical Physiology (12th edition) Elsevior Publisher
Learning Objectives:
At the end of this course the learner must be able to impart education regarding healthy and balanced diet to the masses and provide nutrition education to the vulnerable group of the society.

UNIT-I
Nutrition I: Constituents of food: carbohydrates, proteins, fats, vitamins, minerals; Aspects of Nutrition: Process of Nutrition, Balanced diet; Food safety and hygiene, food handling, hospital catering services.

UNIT-II
Nutrition II: Nutritional disorders (Protein energy malnutrition and Vitamin Deficiency Diseases, Overweight / Obesity); Anaemia: Causes, Identification, Prevention and control; Nutritive value of common Indian foods.

UNIT-III
Diet in health and disease: balanced diet concept; diet in diabetes; diet in hypertension and heart disease; diet in gastro-enteritis and oral rehydration solution; diet in other gastrointestinal diseases; diet in urological disorder; diet in other disorders.

UNIT-IV
Nutrition education: For pregnant and lactating women; for infants and children to meet nutritional needs across age groups, gender and life styles, breast feeding vs. bottle feeding; Misbelieves regarding food intake; for those suffering from common diseases (tuberculosis, Anaemia, vitamin and mineral deficiency, Goitre).

Practical Paper (Food Nutrition & Dietetics) Marks -60
1. Preparation of ORS and usage, Homemade ORS, WHO approved ORS packets, Practical demonstration
2. Posting in Hospital Catering Service
3. Posting in dietetics Department of the Hospital
4. Project on Nutrition and Diet
5. Specimens & models: Identification & Explanation.
Books recommended:-
2. K. Park, 2013 (22nd edition), Textbook of Preventive and Social Medicine, Banarsidas Bhanot.
3. Puja Dudeja, Sukhpal Kaur, Amarjit Singh (1st ed.) Food handler’s A crucial link in food safety, New era International

PAPER Code (NCC-03) Total Marks- 150

Core Skill: Communication and Computer Education in Health Care

THEORY (MARKS-90) (Theory-90 + Practical-60)

Learning Objectives:
At the end of this course the learner must be able to understand the techniques involved in performing effective communication and using the facilities of information technology to facilitate its operation.

UNIT-I

Communication I: Meaning and definition, objectives of health care communication, principles of communication, channel/strategies of communications scope of communication, limitations/barriers of communication, evaluation of communication effectiveness, -Nature, levels, effects, conflict resolution process, Transactional analysis- meaning, benefits, Significance, How to deal with customers.

UNIT-II

Communication II: The role of communication in the health care education, introduction and main forms of organisational communication, communication network in the organisation, effects of changing technology. Process of communication, elements of communication, importance of effectiveness, communication: channels & networks, type of communication, communication on the basis of direction, on the basis of way of expression, on the basis of organisational Structure, communication network, effects of communication network on work performance.

UNIT-III

Fundamentals of Computer applications: General awareness of computer hardware i.e. Operating Systems, CPU and other peripheral devices; Introduction of MS office software; Covering word processing; Spread sheet; Presentation software; Introduction to Coding of Data.

UNIT-IV

Computer applications in Health Care: Introduction to internet and its applications; Introduction to programming in C & its functions; Usage of computer in Hospital administration (medicalse record keeping).
Practical Paper: Core Skill: Communication and Computer Education in Health Care.

(Marks -60)

1. **Project work:** Teacher should assign some project or practical work to the students. This should be in the nature of guided activity, which the students shall have to complete under the direct supervision of the teacher. The students may be given projects on a variety of subjects relating to their discipline.

2. **Practical on computer applications in healthcare:** Documentation (medical record keeping); use of Excel and Power Point; use of E-mail and internet; to perform mail merge; window installation

3. **Practical on health care communication:** Case studies, role plays, scenario based studies, focus group discussion

4. Visit to medical records department (MRD)

Books recommended:-

Second Semester

Paper Code (NCC-04)       Total Marks- 150
Health Care Delivery System       (Theory- 90 + Practical-60)

THEORY (MARKS-90)

Learning Objectives:
At the end of this course the learner must be able to understand the health care delivery system of India, its organisation, staffing and functions.

UNIT-I
Health care delivery system I: Concept of health care delivery system, understanding the health care delivery system at village level, sub-centre level, at primary health centre level, its organization, staffing and functions; Systems of Medicine: Allopathic, AYUSH, Yoga and introduction to medication practices.

UNIT-II
Health care delivery system II: At community health centres level, at district level, at state and centre. Its organization, staffing and functions; health ministry, directorates, tertiary care institutions; private versus government health system; role of NGOs and social welfare department (DWCD).

UNIT-III
Hospital Organization and Services: Definition, types & functions of a Hospital; Concept of health centre versus concept of hospital; Hospital as a health care delivery system; Clinical & Nursing Services: Out-patient department, casualty, intensive care unit, surgical/medical wards, operation theatres, nursing/laboratory services, vaccination etc.

UNIT-IV
Hospital Support Services: Personal hygiene, housekeeping, sterilization, biomedical waste management, campus and hospital sanitation, laundry & linen, kitchen & canteen hygiene maintenance, public relations department, medical record department, transportation/transfer of patients, finance department, material & purchase department, nursing, mortuary, personnel/HR department, pharmacy.

Practical Paper (Healthcare Delivery System)       (60 Marks)

1. Visits to sub centre, primary health centre, community health centre, tertiary care centre; orientation visit to different areas and units of hospital, bio medical waste management centre

2. Vital parameters checking: practical training in checking temperature, blood pressure, pulse rate, respiratory rate in hospital settings
3. Practical training about universal safety precautions (USPs): Handling sharps and needless; BMW (Bio Medical Waste Management); Phlebotomy & I.V. cannulation, vaccination.

4. Hand Hygiene: Washing the hands properly with soap and water; use of re-usable/disposable towels

5. Sterilization Procedures: Using Autoclave, Disinfection in rural setting

6. Public Health: Disinfection of water; Tests for adulterants in food, Sanitary disposal of human waste

Books recommended:-

1. K.Park, 2013 (22nd edition), Textbook of Preventive and Social Medicine, Banarsidas Bhanot.

Training (NCC-05) (Marks -200)

Training / Internship based on Practical Projects

For the courses in respect of said subjects, students have to be attached to hospitals, nursing homes, diagnostic centre for 8 weeks (200 hours) training/internship programme.