

Chapter 6

Minimum Standard Requirements:

Bachelor in Nutrition and Dietetics program

All existing Nutrition and Dietetics Colleges or A new College will impart Nutrition and Dietetics education is suggested the following conditions are fulfilled :

1) Infrastructural, Functional & Equipment, and Human Resource Requirements The establishment of a Nutrition and Dietetics college – No person shall establish a college/institute except after obtaining prior permission from the National Commission (NCAHP). Nutritional Sciences education prepares a person for independent practice and involves extensive clinical training in almost every specialty & super specialty of nutritional care. The following organizations shall be eligible to apply for permission to set up a Nutrition and Dietetics College, namely: -

1. A State Government/Union territory;
2. A University and Deemed to be a University
3. An autonomous body promoted by Central and State Government by or under a Statute for medical education;
4. A society registered under the Societies Registration Act, 1860 (21 of 1860) or corresponding Acts in States; or
5. A public religious or charitable trust registered under the Trust Act, of 1882 (2 of 1882) or the WAKFS Act, 1954 (29 of 1954).

Hospital / Hospital Attachment

- If the college is on the premises of MCI/NMC permitted/recognized Medical College as constituent college, then, there is no requirement for attachment to any other hospital.
- In all other cases Proof of availability of own/attached hospital (Government/Private) for clinical training of 30 students shall be furnished (student: OPD ratio of 1:5). The hospital must be within a 20 km radius of the College. The college must provide mandatory bus service to the students if the hospital is located more than 1 km away from the College. Within 5 years of application of these Rules, the colleges must have their Own Prescribed Hospital in the college Premises.

- College can be affiliated to a maximum five (05) hospitals having indoor and outdoor facility in the above-mentioned specialty clinics.
- Tie-up hospitals cannot get attached to more than two colleges. If the affiliated hospital is attached with two colleges, the OPD strength must be adequately divided among the colleges as per the prescribed student: OPD ratio.
- The affiliated hospital shall provide information regarding any MOU with other colleges, if any & MOU should be for at least five years.
- The MOU should mention the available clinical specialties, patient loads, and availability of required equipment for clinical training with names and designations of the faculties responsible for the training in the hospital.
- Faculty: The college/institute must arrange for Nutrition and Dietetics faculty members for supervision and clinical teaching of students inside the hospital.
- Hospitals may recruit its Registered Clinical Dietitians for supervision and training of Nutrition and Dietetics students and supervision of interns

Land And Building

- If the college is on the premises of a permitted/ recognized medical college, no separate land is required. Existing norms of land for medical college will suffice. Besides that, the constructed area/Building norms for Nutrition and Dietetics College must be fulfilled as per the requirement mentioned below. In all other cases, the applicant must provide the land details on which the institution will be established for providing Nutrition and education education. It should be in the name of the society/ Trust/company applying for the same (sale deed/lease/gift deed etc.). That the applicant Institution / Trust should have an independent building for
- Nutrition And Dietetics College and facilities for clinical training as per the curriculum as prescribed by the commission from time to time.
- Such a building should be constructed in such a way that there is adequate parking space and recreational area or open space for students as prescribed by the commission.
- Such a building should have adequate space and should have an outpatient Dietetics department, various laboratories as needed, office space, classrooms, a hostel, and other ancillary facilities. Dietetics OPD and the college can be placed in different buildings within 50 KM (or as per the NCAHP regulations) distance in the same state of India.

- Minimum exclusive built-up area for such a college should be 38400 sq.ft for the intake of 60 students per batch.
- Building should be universally accessible to persons with disability and as per NBCI guidelines (National Building Code of India).
- Building must be recorded on the appellate institute name or if the land is under lease agreement, it must be for at least 10 years
- Building must have requisite clearances from the respective civic and administrative authorities like - Fire NOC, structural stability certificates, land use certificates, etc.
- The building must have CCTV cameras for CCTV surveillance in every area of common use as can be prescribed.
- Biometric facility for students and staff, faculty attendance record/documentation.

3) Nutrition and Dietetics Departments

Faculty requirement for UG: Full time (FT); Part-time (PT)

It is recommended that a core faculty and student ratio for UG 1:10 be followed.

Ideally, all the faculties should be full-time. In case of non-availability of full-time faculty, 40% may be part-time/visiting/Ad hoc faculties (non-core subjects only)

Faculties appointed for academics for teaching purposes are considered full-time (Maximum of 8 hours per day or Minimum of 40 hours per week).

Qualified Dieticians may be taken as part-time Visiting faculties

Guidelines of Building and Laboratories

Teaching Block

For a college with an annual admission capacity of 60 students, the constructed area of the college should be a minimum of 38400 sq.ft.

The details of the constructed area are given below for an admission capacity of 60 students.

S. No.	Teaching Block	Minimum Area (in sq. feet)
1.	Lecture Hall	8 @ 900=7200
2.	Skill labs for 30 students 1. Nutrition Lab (Food Analysis) 2. Nutritional Biochemistry 3. Institutional Food Service Management 4. Food Microbiology Lab 5. Anatomy & Physiology Lab 6. Nutritional Assessment Lab	1500 1500 1500 1500 1500 1500
3.	Computer lab (1:5 computer student ratio as per student intake)	2000
4.	A.V.Aids Room	1000
5.	Multipurpose Hall	3000
6.	Common Room for Boys	1000
7.	Common Room for Girls	1000
8.	Principal Room with toilet	500
9.	Vice Principal Room	300
10.	Library	3000
11.	One Room for each Head of Departments	5@200=1000
12.	Faculty Room with Ladies and Gents Toilet	2400
13.	Provisions for Toilet for Boys	600
14.	Provisions for Toilet for Girls	600
15.	Admin Room	800
16.	Waiting/Lounge area with Ladies' and Gent's Toilet	1000
17.	Store Room	5 @ 500=2500
18.	Canteen with Pantry	1500
	Total Area	38400 sq.ft.

Clinical Infrastructure

The minimum Equipment (for 30 students) for the Bachelor in Nutrition and Dietetics in Honors Program for various labs is as follows:

1. Nutrition Lab (Food Analysis)
2. Nutritional Biochemistry
3. Food Production and Service Lab Management
4. Meal Management/Dietetics Lab
5. Food Microbiology
6. Anatomy & Physiology Lab

1. Nutrition Lab

Undergraduate students will learn how to measure Body mass, body composition, and the assessment of nutritional status: anthropometric, biochemical lab., clinical and dietary intake.

Equipment/Instrument

- Weighing Machine Digital platform scale 200Kg/BMI electronic scale - 2 no
- Heightometer -medical height measuring weight scale, Stadiometer -2no
- Tape for circumference- Non-stretchable tape - 2 no
- MUAC tape - Coded tape -2
- Skinfold measurements - Harpenden Skinfold Calipers -1no.
- Infantometer -1
- STEP for fitness test -1
- Stadiometer
- Calibration weights -1
- BP Instrument = Digital/Manual -1 no.
- Digital food weighing Balance-1no.
- Body Composition Analyzer- 1 no.

2.Nutritional Biochemistry Lab

- Weighing balance – Regular with Beam balance - 4
- Digital weighing balance - 2
- pH meter
- Water Bath
- Colorimeter- 2
- Spectrophotometer- 1
- Distillation apparatus
- Soxhlet glass apparatus
- Nitrogen analyzer – glass unit
- RM number - glass unit
- Hot air oven
- Muffle furnace
- centrifuge
- Refrigerator
- Test tube stand

Glassware

- Beakers
- Test tubes & Test Tube Holder
- Burette + Burette stand
- Standard flask
- pipettes
- Conical flask

3. Institutional Food Service Management

Cleaning and Washing

- Stainless steel commercial kitchen sinks
- Dishwasher
- Washing machine (Clothes)

Storage

- Refrigerator Commercial
- Deep freezer
- Water storage unit
- Non perishable food storage containers
- Perishable Food storage containers
- Hot food storage racks (cooked food)

Food preparation

- Stainless steel LPG burner
- Gas stock pot stove
- Commercial Mixer
- Heavy duty mixer and grinder
- Induction bulk cooking stove
- Wet grinder
- Roti maker
- steaming equipment
- frying pans
- Cooking pots
- Microwave
- Oven
- Exhaust fans
- Coffee and Tea machines
- Utensils
- Cooking vessels (assorted sizes)
- Kettles
- Steaming equipment
- Idly steamer
- Dosa pans
- Colanders
- Cutting boards
- Double boilers
- funnels

- graters
- Kitchen knives (assorted)
- Measuring spoons and cups (assorted)
- Weighing scales
- spatulas
- Ladles
- Peelers
- Mashers
- Cutlery
- Crockery
- Assorted serving spoons, cups, plates and bowls
- Choppers
- Food processor
- Motor and Pestle
- Can openers
- Slicers
- Pressure cookers
- Frying pans and pots
- Deep frying pan
- Hot and cold food displays
- Thalies with compartments

Safety Equipment

- Fire extinguisher
- Hot food holding gloves

4. Meal Management/Dietetics Laboratory

Equipment/Instrument -

- Gas stoves /Induction stove - 15-20 no.
- Refrigerator -1
- Oven -1
- Microwave-1
- Mixer/Grinder/Chopper-1

Utensils for Preparation and Cooking - 15-20 sets

- Types of kadai
- Pressure Cooker
- Steamers for idli, dhokla, dumplings etc.
- Tawa
- Frying Pan, saucepan
- Sandwich maker/ Griller
- Knives, peelers, graters
- Spatula, spoons, Slotted Turner, Slotted Spoon, Solid Spoon, Soup Ladle, Whisk, Tong,
- Set of 5 Measuring Cups,
- Set of 5 Measuring Spoons
- Measuring jar
- Chopping board
- Mixing bowls

Utensils for Serving- 15-20 sets

- Plates- full, quarter
- Bowls- Large, medium and small
- Soup bowl and spoons
- Teacups/ Mugs
- Casserole
- Microwave-proof serving bowls
- Trays
- Spoons
- Glasses
- Serving Spoons

Utensils for Storage -

- Large, Medium and small boxes for provisions
- Storage cupboards
- Vegetable Bags
- Baskets for vegetables and fruit

Serving Linen -

- Table mats etc.
- Cloth napkins
- Table Covers
- Kitchen towels

5. Food Microbiology Laboratory

- Weighing balance
- pH meter
- Autoclave
- Hot air oven
- Laminar flow (Vertical /Horizontal)
- Colony counter
- Light Microscope
- Fume chamber
- Incubator
- Refrigerator
- Centrifuge
- Bunsen Burner
- Gas Cylinder
- Glassware -
- Test tubes
- Petri dishes
- Wire loop
- Pipettes
- Burettes
- Beakers
- Standard flask
- Test tube holder and Test tube stand
- Conical flask

6. Anatomy and Physiology Laboratory Models -

- Human torso
- Human Respiratory system
- Organ system

Individual organs -

- Human lungs
- Kidney and Bladder
- Brain
- liver and pancreas
- Sahli's pipette
- Microscope (Light/ Digital)
- Hot air Oven
- Colorimeter
- Haemoglobin meter
- Centrifuge
- Blood pressure monitor
- Sphygmomanometer
- Stethoscope
- Haemocytometer
- Bunsen Burner
- Refrigerator
- Tripod stand
- Steamers
- Water bath
- Electric kettle
- Balances
- Thermometer
- Wash bottles
- Body fat Analyser (Desirable)
- Brushes
- Tongs
- Cotton

- Spirit
- Syringes
- Hb Pipettes
- Stop watch
- Mounted slides
- Cover slip
- Test tube holder
- Test tubes
- Capillary tubes
- Crucible
- Lancets
- Pipettes
- Beakers
- Graduated Spatula
- Watch glass
- Tissues -
- Epithelial
- Connective
- Muscular
- Nervous
- Bone
- Charts – Different Concepts/ aspects
- A school of Nutrition and Dietetics should have an attached clinic/hospital to cater to clinical learning.

Guidelines for standalone institutes:

A clear legally vetted (Notarised stamp paper) Memorandum of understanding (MoU) needs to be provided for any institute/hospital to share the infrastructure and it should follow the NCAHP guidelines

Desirable Batch size for Bachelor of Nutrition and Dietetics in Honors :

It should be proportional to the OPD (Outpatient Department) of the clinic/hospital. Each student should be able to examine a minimum of 5 patients per day. For example: For an OPD of 150, one can have an intake of 30 students per batch. A clinic/hospital having an OPD of 500 can have an intake of 100 students per batch. If the intake is more than 30, infrastructure should also be increased proportionally. Student and faculty ratio is 10:1. The maximum batch size should be proportional to infrastructure, number of faculties, and OPD.

Desirable Batch size for Masters in Bachelor of Nutrition and Dietetics:

A maximum of 25% of the Bachelor's program shall be the batch size of a post-graduate program. Teachers at the level of Assistant Professor II or Scientist D and above shall guide the students. The teacher-student ratio for dissertation guidance shall be 1:4.

Faculty requirement for PG:

Principal/Vice Principal/HOD is the same for both UG and PG programs.

It is recommended that a core faculty and student ratio of 1:3 for PG to be followed.

Student-faculty ratio needs to be 3:1 at least Associate Professor Level for PG teaching. In case of non-availability of full-time faculty, 30% may be part-time/visiting/Ad hoc faculties.

Separate facilities need to be provided for PG students/Fellowship programs/PhD programs.

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Library Details:

Item	Requirements
Text Books As per the syllabus; one copy of the Book per 10 students.	Approximately 450 books for 30 intake and 900 books for 60 intake for UG.
Reference Books	100 Advanced Books As per requirement
Journals	At least 2 international and 2 national journals
subscription to electronic databases/e-journals	Required
Mandatory Internet facility Access to e-library Equipment	Minimum 15 computer terminals for 60 students/8 for 30 students

Suggested faculty strength for UG

30 seats (5*30=150 students)	40 seats (5*40=200 students)	50 seats (5*50= 250 students)	60 seats (5*60= 300 students)	100 Seats (5*100= 500 students)
Professor-1 Associate Professor-2 Assistant Professor-12	Professor-1 Associate Professor-3 Assistant Professor-16	Professor-1 Associate Professor-4 Assistant Professor-20	Professor-2 Associate Professor-4 Assistant Professor-24	Professor-4 Associate Professor-8 Assistant Professor-38

Exit exam / Licensure exam

There shall be a third-party exit/licensure exam at the end of the Internship (4th year) for the Bachelor's program. The exit examination, or licensure examination, serves as a prerequisite assessment for clinical practice eligibility. While the university may confer a degree completion certificate, it is contingent upon the successful clearance of the exit examination to be eligible for clinical practice privileges within India. Additional criteria and regulations governing the exit examination will be as per the guidelines established by the National Commission for Academic and Health Professions (NCAHP).

Teaching Faculty and Infrastructure

The significance of providing a stimulating teaching-learning environment for students is a prerequisite for a good learning outcome.

The number of teaching staff must be adequate as per the expected student-to-teacher ratio. Ideally, a ratio of 75 to 100:1 for theory and 20: 1 for practicum is desired. Different innovative teaching pedagogies should be used for different subjects. A teacher is expected to make a teaching plan before the commencement of the semester spelling out the teaching and evaluation methodologies aligned with the learning outcomes of the students.

The infrastructure should include big and small classrooms. Ideally, the majority of the classrooms should be smart classrooms and equipped with interactive boards and computers. The Internet facility should be available to the students. The laboratories for practicals should be equipped with the desired equipment as per the coursework. Smaller teaching areas for tutorial and problem/case-based learning approaches should also be provided.

The teaching workload will be based on the norms set by the National State Councils for the designated posts (20 hours per week for Assistant Professors and 18 hours per week for Associate Professors and Professors)

Desirable Dietitian-Patient Ratio

The staffing of a Dietician is related to the workload of patients and dietetic activities. As per the capacity assessment of Individual staff members, the parameters to be considered are:

- Number of patient contacts per year per
- Referral rate and rate of patient turnover
- Ratio of new to follow-up contacts
- Patient complexity mix
- Referral to treatment time
- Percentage of time spent in workforce activities

Estimates based on the above parameters of the Desirable Dietitian-Patient Ratio in Hospitals in India are proposed as :

Dietitian: Patients in General Wards; 1: 60

Dietitian: Patients in Intensive Care Unit; 1:25

Recognition of Title and Qualification

A Dietitian-Nutritionist is a professional who applies the science of food and nutrition to promote health, prevent and treat disease to optimize the health of individuals, groups, communities, and populations. It is a known fact that with career advancement, the nomenclature will also vary and will also depend on the sector and profile of the professional. The following level progression table has been proposed by the task force to map the nomenclature, career pathways, and progression in different sectors of professional practice for dietitians. Tables 2 (A), 2 (B), 2(C), and 2(D) below indicate the various channels of career progression in four distinct sectors such as clinical setting, academic, research and industrial setup. It is envisaged that the dietitian will have one entry pathway – students with baccalaureate. The level of responsibility will increase as the career progresses. The table also indicates the corresponding level of qualification with experience required by the professional to fulfill the requirements of each level. Considering the extent of the patient dealing in the case of dietitians and other professions, the government aims to promote bachelor's and master's degree courses. In a clinical setting to work the position of Assistant Dietitian and Dietitian, the candidate must attain a baccalaureate and to work the position of Senior Dietitian and Chief Dietitian the candidate must attain masters.