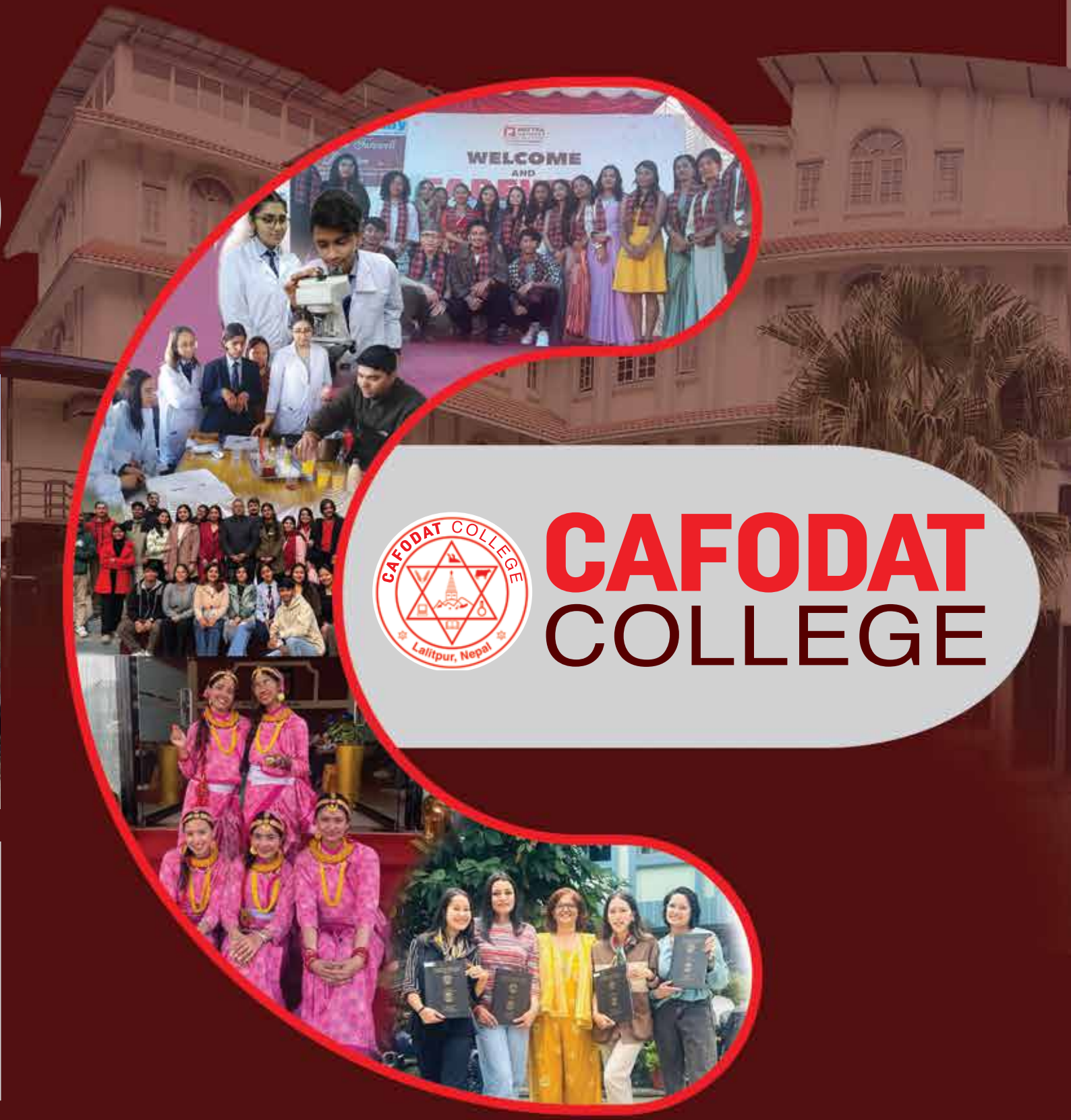
"Technology For Sustainable Development"



CAFODAT COLLEGE

Affiliated to

PURBANCHAL UNIVERSITY


PLAN ACADEMY
CAFODAT COLLEGE


食品學科史館


CAFODAT

Welcome to CAFODAT College

CAFODAT College, formerly known as the College of Applied Food and Dairy Technology (CAFODAT), is a premier academic institution in Nepal, dedicated to delivering quality education. Since its establishment in 2005, CAFODAT College has been offering diverse academic programs in affiliation with Purbanchal University (PU) and the Council for Technical Education and Vocational Training (CTEVT).

Our Academic Programs:

1. M.Sc. in Nutrition and Dietetics
2. Bachelor of Food Technology
   (B. Tech. Food Technology)
3. B. Sc. in Food, Nutrition and Dietetics
   (B. Sc. FND)
4. Bachelor of Information Technology (BIT)
5. Diploma in Food and Dairy Technology

Beyond academic programs, CAFODAT College is actively engaged in offering training and up-skilling opportunities. Our dedicated research department supports various innovative research initiatives aimed at advancing knowledge in food technology, dairy science, nutrition and dietetics.

CAFODAT College is actively working to expand its academic offerings by introducing new academic programs M. Tech. in Food Technology and other programs in Computer Science, Artificial Intelligence (AI), Data Science, and Management. The college is in close consultation with Purbanchal University to offer these proposed programs.

Why Choose CAFODAT College?

Our experienced faculty comprises food scientists, dairy technologists, nutritionists, dietitians, IT professionals, researchers, management experts, and industry professionals who bring real-world insights into the classroom.

At CAFODAT College, we are committed to empowering our students with the skills and knowledge necessary to thrive in their careers while contributing to the local and global advancements in food technology, dairy technology, nutrition and dietetics.

Located in Kumaripati, Lalitpur, a vibrant educational hub, CAFODAT College is easily accessible and equipped with required facilities for academic activities, hands-on training, and research.

Join us to become part of an academic institution that nurtures future leaders and innovators in these dynamic fields.

What is Food, Nutrition and Dietetics?

Food, Nutrition and Dietetics is a scientific and applied discipline that focuses on the relationship between food, health and human well-being. It explores how the nutrients in food affect the body, how dietary choices influence health and disease and how individuals and communities can achieve optimal nutrition through balanced diets and healthy eating practices.

This field encompasses three interconnected areas:

- **Food:** Understanding the composition, safety, quality and processing of food to ensure it is nutritious and safe for consumption.
- **Nutrition:** Studying how nutrients in food affect growth, development, metabolism and overall health across different life stages.
- **Dietetics:** Applying nutritional science to prevent and manage diseases through personalized diet plans and therapeutic nutrition, especially in clinical and public health settings.

Professionals in this field play a vital role in promoting health, preventing malnutrition and lifestyle-related diseases and improving food systems through education, policy and innovation. Food, Nutrition and Dietetics is not only about what we eat—it's about empowering individuals and societies to live healthier, longer lives.

B. Sc. Food, Nutrition and Dietetics

The Bachelor of Science in Food, Nutrition and Dietetics (B. Sc. FND) is a dynamic and interdisciplinary undergraduate program, offered by CAFODAT College in affiliation with Purbanchal University that combines the scientific study of Food Science, Human Nutrition and Dietetics. Designed to address the growing demand for professionals in both the food and health sectors, the program blends principles from biology, chemistry and health sciences to explore how food impacts health, wellness and disease prevention.

This program offers comprehensive coverage of food science, the scientific study of the physical, chemical, biological and technological aspects of food. It includes the principles and practices of food processing, preservation, safety, storage and distribution - ensuring students understand the entire food production chain from farm to fork.

In the nutrition component, students explore how food supports body functions, in-depth education on key topics including human nutrition across the life cycle therapeutic nutrition, food safety and quality, diet planning, food service management, community nutrition and the role of diet in maintaining health and preventing disease. The course explores into nutritional requirements, diet planning, and nutrition deficiency disorders, equipping students with the ability to promote nutritional well-being at both individual and community levels.

The dietetics segment focuses on applying nutritional principles to meet diverse dietary needs, especially in therapeutic and clinical contexts. Students learn to assess dietary habits and design appropriate diet plans based on specific health conditions or life situations, preparing them to support patient care and public health goals effectively.

A unique feature of the program at CAFODAT College is the specialization option offered in the 7th semester, allowing students to choose between two distinct career pathways:

- Food Technology, for those interested in food processing, quality control, product development and food industry innovation.
- Nutrition & Dietetics, for those pursuing careers in clinical dietetics, public health nutrition, wellness consulting and therapeutic nutrition.

  This flexibility empowers students to align their academic focus with their career goals, whether in hospitals, public health institutions, food industries, research centers or academia.

Join CAFODAT College to build a healthier and safer world through science, innovation and compassionate service in the fields of food and nutrition.

Program Objectives:
B. Sc. Food, Nutrition and Dietetics

1. To Provide Interdisciplinary Scientific Knowledge
Equip students with foundational and advanced knowledge in food science, human nutrition and dietetics, integrating principles from biology, chemistry and health sciences.

2. To Develop Competence in Food Science and Technology
Train students in the scientific principles and technological applications related to food processing, preservation, safety, storage and distribution from farm to fork.

3. To Promote Nutritional Health and Well-being
Enable students to understand the role of nutrition in supporting human physiology and preventing diseases across the life cycle, including maternal and child health, aging and community nutrition.

4. To Prepare Clinical and Therapeutic Dietitians
Develop student ability to assess nutritional status and design individualized therapeutic diet plans based on medical conditions, dietary needs and lifestyle factors.

5. To Foster Research and Innovation
Encourage scientific inquiry, critical thinking and innovation in food and nutritional sciences to contribute to advancements in health care, food quality and public health nutrition.

6. To Address Community and Public Health Needs
Train students to work in diverse community settings to promote nutritional awareness, combat malnutrition and support food security initiatives.

7. To Offer Career-Aligned Specialization
Provide flexible academic pathways in the 7th semester - Food Technology or Nutrition & Dietetics - enabling students to specialize in line with their professional aspirations.

8. To Prepare Graduates for Diverse Career Opportunities
Equip students with the skills and knowledge required to pursue careers in hospitals, public health agencies, food industries, research organizations, academic institutions and wellness consultancies.

9. To Foster Ethical and Professional Values
Promote a strong sense of responsibility, integrity and compassion in students, preparing them to serve society effectively in areas such as food safety, nutrition advocacy and clinical care.

10. To Support Lifelong Learning and Higher Education
Build a strong academic foundation for students aspiring to pursue postgraduate studies or professional certifications in nutrition, dietetics or food science.

Career/Job Prospects for B. Sc. FND Graduates

Clinical & Therapeutic Nutrition

- Clinical Dietitian (Hospitals, Clinics, Health Centers)
- Nutrition Therapist (Specialized care for chronic and lifestyle diseases)
- Diet Counselor (Private practice, wellness centers)

Public Health & Community Nutrition

- Public Health Nutritionist (Government and NGO-run nutrition programs)
- Community Nutrition Officer (Nutrition education, maternal and child health)
- Nutrition Program Coordinator (Health and development organizations)
- Food and Nutrition Policy Advisor (Public policy and advocacy)

Food Science & Technology

- Food Quality Control/Assurance Officer (Food manufacturing industries)
- Food Technologist / Food Safety Regulators / Food Analysts etc. jobs in the Government.
- Food technologist in food industries.
- Product Development Specialist (R&D labs, food product innovation)
- Food & nutrition professionals in NGOs & INGOs.

Education & Research

- Lecturer/Instructor in Food & Nutrition Sciences (Colleges and training institutions)
- Nutrition Research Assistant/Scientist (Research centers, universities)
- Curriculum Developer (Nutrition education content for institutions or NGOs)

Health, Fitness & Wellness

- Wellness Coach (Gyms, fitness centers, corporate wellness programs)
- Nutrition Consultant (Weight management centers, sports nutrition)
- Lifestyle and Health Coach (Corporate and personal clients)

Entrepreneurship & Consultancy

- Private Diet Consultancy Practice
- Start-ups in Healthy Food Products
- Nutrition App or Diet Planning Platform Developer

Development, NGOs & International Organizations

- Nutrition Officer (UN agencies like WHO, UNICEF, WFP, FAO)
- Program Manager – Food Security & Nutrition (INGOs, NGOs)
- Monitoring & Evaluation Officer – Health & Nutrition Projects

Food Service & Management

- Dietitian in Food Service Management/ Management dietitian (Hospitals, hostels, institutions)
- Menu Planner/Nutritionist (Schools, airlines, elderly care homes)
- Catering Manager with Nutritional Expertise (Hotels and large kitchens)

Further Education & Certifications

- Postgraduate Studies (M. Sc. in Nutrition, Dietetics, Food Science, M. Tech. Food Tech.)
- International Opportunities (Specialized fellowships, research positions)

First Semester

Course Title	Credit Hours		Total Credit
	Theory	Practical	
Applied Physics	2	1	3
Applied Chemistry	2	1	3
Applied Microbiology	2	1	3
Human Anatomy	2	1	3
Basic Food Science	2	1	3
Principles of Human Nutrition	2	1	3
Human Physiology	2	1	3
Total Semester Credit	14	7	21

Second Semester

Course Title	Credit Hours		Total Credit
	Theory	Practical	
Applied Bio Chemistry	3	1	4
Food and Dairy Chemistry	3	1	4
Instrumental Method of Food Analysis	3	1	4
Introduction to Nutrition and Ayurveda	2	1	3
Post-Harvest Technology	2	1	3
Pathophysiology	2	1	3
Scientific Writing	2	-	2
Total Semester Credit	17	6	23

Third Semester

Course Title	Credit Hours		Total Credit
	Theory	Practical	
Nutrition Through Life Cycle	2	-	2
Public Health Nutrition	2	-	2
Food and Dairy Microbiology	3	1	4
Modern Biotechnology and Genetic Engineering	2	1	3
Quality Control and Assurance	2	1	3
Storage and Packaging Technology	3	1	4
Industrial Microbiology	2	1	3
Total Semester Credit	16	5	21

Fourth Semester

Course Title	Credit Hours		Total Credit
	Theory	Practical	
Food Toxicology	2	1	3
Food Processing and Preservation	2	1	3
Maternal Nutrition and Child Health	3	1	4
Functional Food and Nutraceuticals	2	1	3
Basic Diet Therapy- I	3	1	4
Food Process and Engineering	3	1	4
Professional Ethics and Morality	2	-	2
Total Semester Credit	17	6	23

Fifth Semester

Course Title	Credit Hours		Total Credit
	Theory	Practical	
Community Nutrition	2	-	2
Food and Nutrition Ecology	2	-	2
Sport Nutrition	2	1	3
Medical Microbiology	2	1	3
Basic Diet Therapy- II	3	1	4
Food and Dairy Products Development	3	1	4
Nutrition Education and Communication	2	1	3
Total Semester Credit	16	5	21

Sixth Semester

Course Title	Credit Hours		Total Credit
	Theory	Practical	
Epidemiology	2	1	3
Nutrition Assessment	2	1	3
Basis Geriatric Nutrition	2	-	2
Research Methodology	3	1	4
Biostatistics	3	1	4
Food System and Climate Change	2	-	2
Principle of Management and Marketing	2	-	2
Total Semester Credit	16	4	20

Seventh Semes

Course Title	Credit Hours		Total Credit
	Theory	Practical	
Elective 1 : Food			
Technology of Food Products I Fruits and Vegetable	2	1	3
Technology of Food Products II Cereal and Legumes	3	1	4
Technology of Food Products III Fats and Oil	2	1	3
Technology of Food Products IV Spice Tea and Coffee	3	1	4
Technology of Food Products V Meat Fish and Poultry	3	1	4
Dairy Plant Operation and Instrumentation	3	1	4
Total Semester Credit	16	6	22
Elective 2 : Nutrition and Dietetics			
Emergency Nutrition	2	1	3
Nutrition Policy and Program	3	1	4
Water, hygiene and Sanitation (WASH)	2	1	3
Food Service Management	3	1	4
Medical Nutrition Therapy	3	1	4
Infant and Young Child Feeding Practices (IYCF)	3	1	4
Total Semester Credit	16	6	22

Course Title	Credit Hours		Total Credit
	Theory	Practical	
Field Trips	-	2	2
Seminar	-	2	2
Internship	-	8	8
Thesis	-	4	4
Total Semester Credit	-	16	16

	Credit Hours		Total Credit
	Theory	Practical	
Total Course Credit	112	55	167

Field Trips, Internship, and Thesis in B. Sc. Food, Nutrition and Dietetics

1. Field Trips: Bridging Theory with Practice

Field trips are a vital component of the B. Sc. FND program, aimed at providing students with practical exposure to real - world applications in food, nutrition, and dietetics. These experiential learning visits complement theoretical knowledge by offering firsthand insights into industry operations, community nutrition programs, and clinical nutrition practices. In addition to regular field visits conducted throughout the course, students are required to participate in a mandatory field trip during the 8th semester, which carries a weightage of 2 credit hours.

Key Field Trip Destinations Include:

- Food industries and processing units (e.g., dairy plants, beverage industries, bakeries)
- Public health nutrition programs (maternal and child nutrition centers, immunization programs)
- Hospitals and dietetic departments (to observe clinical dietetic practices)
- Agricultural research centers and food technology labs
- NGOs and INGOs working in nutrition, food security, and health promotion

Objectives:

- Understand food processing, quality assurance, and hygiene practices.
- Observe community-level nutrition and dietetics interventions.
- Explore the integration of dietetics into hospital care and therapeutic nutrition.

2. Internship: Gaining Professional Experience

The internship is a mandatory and integral part of the B. Sc. Food, Nutrition and Dietetics (B. Sc. FND) program, designed to provide students with comprehensive practical experience and professional exposure in real-world settings. Carrying 8 credit hours, this three-month internship is undertaken after the completion of the 7th semester and plays a crucial role in bridging the gap between academic learning and professional practices.

Areas of Internship Placement:

- Hospitals and Clinical Settings (clinical dietetics, nutrition counseling, patient diet planning)
- Public Health Institutions (community nutrition and outreach programs)
- Food Industries (product development, food safety, quality control, and processing)
- Government and Non-Government Organizations (nutrition programs, advocacy, education)
- Academic and Research Centers (dietary assessment tools, surveys, lab-based analysis)

Learning Outcomes:

- Develop professional competencies in real working environments.
- Learn communication, counseling, and ethical practices in nutrition and dietetics.
- Build teamwork and leadership skills while working with interdisciplinary professionals.

3. Thesis/Research Project: Fostering Scientific Inquiry

The Thesis is a core academic requirement of the B. Sc. Food, Nutrition and Dietetics (B. Sc. FND) program, carrying 4 credit hours and is undertaken during the 8th semester after the completion of all coursework and internship. This research component provides students with an opportunity to engage in independent inquiry, applying their academic learning to real - world problems within the fields of food, nutrition and dietetics.

Scope of Research:

- Clinical nutrition and therapeutic diets
- Community nutrition and dietary patterns
- Food safety and microbiological analysis
- Functional foods and nutrition education
- Nutritional assessment and public health studies
- Global nutrition and disease with relate to lifestyle pattern

Key Components:

- Proposal development and literature review
- Data collection through surveys, interviews or laboratory experiments
- Data analysis, interpretation and conclusion
- Final thesis submission and presentation/defense

Purpose:

- Promote analytical and scientific thinking.
- Train students in research methodology, ethics and academic writing.
- Prepare students for higher studies or research-based careers.

Teaching Pedagogy

The B. Sc. Food, Nutrition and Dietetics program at CAFODAT College employs a dynamic and student-centered teaching pedagogy that blends theoretical instruction with practical application. The faculty is committed to delivering high-quality, evidence-based education to prepare students for successful careers in nutrition and dietetics.

Key teaching methodologies include:

1. Interactive Lectures:

The faculty at CAFODAT College employs a dynamic teaching-learning approach that combines structured lectures with active student participation through questions, discussions, and interactive activities. This method is designed to foster deeper engagement and enhance learning outcomes within a technologically equipped and formal classroom environment.

2. Laboratory Sessions:

Practical lab work allows students to apply theoretical knowledge in hands-on settings, enhancing their understanding of food composition, nutritional analysis and diet formulation.

3. Field Research and Community Engagement:

Students gain field experience by visiting schools, health posts, local government bodies, women's groups, and Female Community Health Volunteers (FCHVs) to collect data and engage in community-based research activities.

4. Group Projects and Collaborative Learning:

Team-based assignments foster collaboration, communication, and problem-solving through activities such as case analysis, research projects and presentations.

5. Case Study Analysis:

Real-life scenarios are used to develop critical thinking, decision-making and clinical reasoning skills, helping students understand the practical implications of theoretical knowledge.

6. Practicum and Internship Placement:

Supervised practicums and internships in hospitals, clinics, community health centers, and food industries offer students valuable real-world experience and professional training. Additionally, placements in nutrition-focused projects, as well as with national and international NGOs, further enrich their practical learning and exposure to the field.

7. Online and Blended Learning:

The program incorporates online learning tools and virtual classes, including lectures by visiting faculty from Nepal and abroad, ensuring students benefit from global perspectives and expertise.

8. Seminars and International Conferences:

CAFODAT College regularly hosts and co-hosts international conferences, seminars, and workshops, providing a platform for academic exchange, professional development and global collaboration.

Eligibility Criteria for Admission

Applicants must have completed any one of the following qualifications from a recognized board or university with a minimum GPA of 2.0 or 45% aggregate marks:

- School Leaving Certificate Examination (Grade XII with Physics, Chemistry, English, (Biology or Mathematics or Computer Science).

Or

- +2 science or I. Sc. or PCL with (Physics, Chemistry, English, (Biology or Mathematics or Computer Science).

Or

- A level with physics, Chemistry, English, (Biology or Mathematics or Computer Science)

Or

- PCL Nursing or Diploma in Engineering, Food and Dairy Technology, Animal Science, Plant Science, Pharmacy, General Medicine, Lab Technology, Forestry and any other three years Diploma program conducted by CTEVT with (Physics, Chemistry, English, (Biology or Mathematics or Computer science)).

Scholarship and Support

CAFODAT COLLEGE provides Scholarships up to 3 students as per the scholarships by-law of Purbanchal University in B. Sc. Food, Nutrition & Dietetics program.

Following are the additional scholarships the college offers:

i. CAFODAT COLLEGE Alumni Scholarships.
ii. Ram Raja Shah Memorial Scholarships.
iii. CAFODAT COLLEGE research endowment grant.
iv. CAFODAT COLLEGE provides limited waiver on Tuition fee to immediate family members of Female Community Health Volunteers (FCHVs), Nepali Army and Nepal Police.

CAFODAT COLLEGE

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