



Bangladesh Accreditation Council

Discipline/Subject Specific Requirements for Accreditation of Academic Program

Discipline/Subject: Food and Nutrition

(Applicable for Food Sc./Food Tech./ Food Engg./Nutritional Sc./Similar Degrees)

Standard 1: Governance

The governance system must work in a manner that ensures better management of the program towards the achievement of mission and objectives of the HEI/PoE in a way that effectively benefits the stakeholders.

Criterion 1.5: The HEI/PoE has a documented class size policy and maintains class size that is appropriate for effective management of the teaching-learning-assessment to ensure better attainment of learning outcomes.

Class size (number of students in a theoretical class): Maximum 40

Class size (number of students in a practical class): Maximum 20

Standard 4: Curriculum

Curriculum must be outcome-based and consistent with the qualifications framework (QF) of Bangladesh for higher education. It should be comprehensive enough to guide the faculty and students towards systematic attainment of learning outcomes and fulfilment of mission and objectives of the PoE.

Criterion 4.2: Curriculum aims at producing graduates focusing on graduate attributes, that are defined following the identified needs of the stakeholders and learning domains in the QF of Bangladesh for higher education.

Graduate Attributes for Bachelor Degree Program:

1. Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization to develop solutions of complex engineering problems.
2. Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and

engineering sciences with holistic considerations for sustainable development.

3. Design creative solutions for complex engineering problems and design systems, components or processes to meet identified needs with appropriate consideration for public health and safety, whole-life cost, net zero carbon as well as resource, cultural, societal, and environmental considerations as required.
4. Conduct investigations of complex engineering problems using research methods including research-based knowledge, design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.
5. Create, select and apply and recognize limitations of appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering problems.
6. When solving complex engineering problems, analyze and evaluate sustainable development impacts to: society, the economy, sustainability, health and safety, legal frameworks, and the environment.
7. Apply ethical principles and commit to professional ethics and norms of engineering practice and adhere to relevant national and international laws. Demonstrate an understanding of the need for diversity and inclusion.
8. Function effectively as an individual, and as a member or leader in diverse and inclusive teams and in multi-disciplinary, face-to-face, remote and distributed settings.
9. Communicate effectively and inclusively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, taking into account cultural, language, and learning differences.
10. Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team and to manage projects and in multidisciplinary environments.
11. Recognize the need for, and have the preparation and ability for independent and lifelong learning; adaptability to new and emerging technologies and critical thinking in the broadest context of technological change.
12. Demonstrate knowledge and understanding of the competences necessary to transform opportunities and ideas into a new business.

Graduate Attributes for Master's Degree Program by course:

1. Possess extensive understanding of the discipline or disciplines they specialize in;
2. Demonstrate exceptional decision-making and interpersonal abilities, as well as a comprehensive understanding of one's own assets and weaknesses;
3. Possess the ability to start and implement constructive change in their surroundings, including their employment and professions;
4. Achieve a high level of proficiency in communication, problem-solving, generic research activities, and writing.
5. Can enhance their cognitive and analytical abilities by engaging in a variety of educational experiences.
6. Strive to be critical and inventive thinkers with a propensity for ongoing self-directed learning.

Criterion 4.7: In case of Bachelor degree program curriculum of the program includes minimum 25% of total credits for general education courses with clearly defined course learning outcomes and mapped with PLOs and learning domains of QF. In the case of the Master's degree program, the curriculum of the program includes minimum 10% of total credits for general education courses with clearly defined course learning outcomes and mapped with PLOs and learning domains of QF.

List of a few general education courses but not limited to:

1. Bangla Language and Literature
2. English Language and Literature
3. Environmental Science
4. Communicative English
5. Elementary Economics and Food Marketing
6. Professional ethics and morality
7. Sociology and Social Inequality
8. Law for Life and peace
9. Business Ethics and Environment
10. Communication and presentation Skills
11. World cultures and geography etc.
12. Employability
13. Leadership and management
14. Entrepreneurship

(Note: POE will select appropriate general education courses considering GA and PLO)

Criterion 4.9: Provisions of internship/project/dissertation/field work/work integrated learning opportunities are included in the curriculum.

- (i) Field trip
- (ii) Internship
- (iii) Project work and report writing

Standard 6: Student Admission & Support Services

The HEI/PoE must set appropriate entry requirements and select the right candidates for a particular program under a fair and transparent admission policy. Students must have adequate and appropriate support for better attainment of learning outcomes, exploring potentials, molding personality and preparing them for the real-life situation with a sense of responsibility and integrity.

Criterion 6.1: The HEI/PoE maintains a clearly defined and well-communicated admission policy with transfer and withdrawal provisions, entry requirements that reflect the level of qualifications required to match with the nature of the discipline and mission of the PoE. Admission policy is effective to select students who have potential and are able to afford the academic load to complete the program successfully.

Requisite qualifications for admission in the Bachelor Degree (Undergraduate) program: H.Sc. (with Physics, Chemistry, Mathematics and Biology)/Equivalent

Requisite qualifications for admission in the Master Degree (Graduate) program: Bachelor of Science in relevant field and/or Allied field

Criterion 6.7: PoE ensures and facilitates the participation of students in co-curricular activities and community services under the management of the HEI on a regular basis to promote creativity, social responsiveness, leadership qualities, values, molding personality towards holistic development.

List of co-curricular activities to support the defined GA but not limited to:

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|---|---------------------------------|
| (i) Rover Scout | (vi) Career Club |
| (ii) Bangladesh National Cadet Corps (BNCC) | (vii) Blood Donors Organization |
| (iii) Debating Society/Club | (viii) Science Club/Society |
| (iv) Environmental Club | (ix) Literature Society |
| (v) Nutrition Club | (x) Music Society/Cultural Club |

(Note: POE will select appropriate co-curricular activities and encourage students to participate)

Standard 7: Faculty and Professional Staff

The HEI/PoE must have a policy to ensure the availability of adequate qualified faculty and professional staff with reasonable teacher student ratio.

Criterion 7.8: The PoE maintains an ideal combination of faculty with 10% Professor, 20% Associate Professor, 40% Assistant Professor and 30% Lecturer with reasonable teacher student ratio, depending on the nature of discipline, as necessary for effective teaching learning in the academic program/discipline.

Teacher-Student ratio: 1:12

Standard 8: Facilities & Resources

The HEI/PoE must ensure availability and access to the appropriate and adequate facilities & resources necessary for effective teaching, learning and research depending on the nature of discipline and program.

Criterion 8.4: Laboratory facilities, instructional technology & software, IT learning facilities that are identified through curriculum mapping as necessary to attain the defined learning outcomes of program and course(s) and to conduct research are in good condition with appropriate safety measures, appropriate, adequate and accessible when needed by the students and faculty members under a policy that ensures timely repair/replacement, supply and continuous improvement.

List of Laboratories:

1. Food Chemistry lab/Analytical lab/Chemistry lab/Food Analysis Lab.
2. Biochemistry and Physiology Lab. (Food Tech. & Nutrition)
3. Food microbiology and Food safety lab/Quality Control Lab.
4. Food processing Lab.
5. Product development and sensory science lab/similar lab.

List of instructional technology and software (IT facilities):

MATLAB, R, Python, Statistical package (SPSS, SAS etc.), Nutritionist Pro and/or other data analysis tool.

List of other facilities essential for the discipline:

1. Pilot plant with various production/processing lines.

Other requirements that are important for quality education in the discipline:

1. Engineering Workshop (Mandatory for Food Engg. Degree)
2. Cold storage facilities