

HIGHER EDUCATION COMMISSION
National Computing Education Accreditation Council
(NCEAC)

**GUIDELINES & PROCEDURES FOR SEEKING
ACCREDITATION OF NCEAC**

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Scope

The following Bachelor level (4 years based) computing degree programs fall in the preview of the accreditation by NCEAC:

- a. Computer Science b. Software Engineering c. Information Technology
d. Information Systems e. Bioinformatics f. Cyber Security*
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I. Accreditation-General Framework

The Council shall take into consideration the following aspects for accreditation of degree programs in the computing related subjects:

- i) Overall scope and structure of the program
- ii) Curricula/syllabi
- iii) The requisite infrastructure
- iv) The faculty
- v) Level of compatibility with international standards and trends
- vi) Level of Skill Development by the program
- vii) Level of integration of science and technology
- viii) The student support
- ix) The laboratory facilities
- x) Facilities for student activities and other amenities
- xi) Financial aid/assistance
- xii) Level of job placement of graduates

II. Accreditation Criteria

Student:

- Assumption: The following resources are required for a single entry program with maximum of fifty students. However, in case of multiple entry program or intake of more than fifty or both, the criteria will be adjusted accordingly.

Faculty:

The full-time faculty means that the full-time faculty available and qualified to teach core-computing courses. Minimum of seven permanent core faculty members should be available.

- At least one faculty member should be holder of PhD degree in the domain of computing
- Six faculty members having eighteen years based MS or equivalent degree in the domain of computing
- Faculty teaching load at minimum 3 and maximum of 6 courses per year must be considered at the time of evaluating the full-time faculty requirements.

Curriculum:

- Curriculum of the program should be as per respective guidelines provided by HEC.
- The credit hours for the respective computing program should be equal to or greater than 130 and structured on the basis of minimum 4 years duration.

Infrastructure:

Classrooms:

- Minimum 3 classrooms per 200 students' batch of 4 sections each of 50 students must be clearly mentioned as the guiding data for the purpose of filling this evaluation form.

Labs:

Following categories of labs will be considered at the time of evaluation:

- General Programming Lab(s)
- Systems Lab(s)
- Hardware Lab(s)

The number of hardware stations available should be 1:3 but 1:5 is also acceptable where students tend to keep laptops.

Library:

- Minimum of 4 computing related books per students should be available
- At least 5 IEEE/ACM transactions/proceedings should be available in hard copy.
- At least 10 technical Magazines should be available in hard copy.

Other:

- All supporting facilities should also be available.

❖ It is important to note that the above mentioned minimum eligibility conditions are on the assumption that the program should have single entry admission per academic year.

III. Accreditation Visits

- a. NCEAC shall constitute an Accreditation Inspection Committee (AIC) for purpose of inspection visit to evaluate each respective candidate program from the approved list of evaluators.
- b. The Chairperson of the Council shall head the AIC or, a Member of Council as nominated by the Chairperson of NCEAC.

IV. Selection of Program Evaluators

The following been previously decided by the Council regarding qualifications of the Program Evaluators:

- PhD in Computing with minimum of 3 university level years teaching experience in computing program OR

ALL PROGRAM EVALUATORS ARE ASSESSED AND APPROVED BY THE COUNCIL. CURRENTLY, NCEAC HAS DISTINGUISHED SENIOR FACULTY MEMBERS OF COMPUTING DOMAIN AS APPROVED PROGRAM EVALUATORS, WHO ARE SERVING IN REPUTED PUBLIC & PRIVATE SECTOR INSTITUTIONS

V. Outcomes of Accreditation Inspection

Batches of the computing degree programs will be accredited. However, the Council will have authority for the following:

- Accreditation of the batches of respective computing degree program for the maximum period of three batches.
- An accredited computing degree program maybe re-evaluated on the basis of complaints by public/students/employers. The Council has authority to withdraw the existing accreditation of the computing degree program.

VI. Procedure for Seeking Accreditation of Computing Program (s)

NCEAC has launched its online Accreditation Automation System (AAS) for accepting accreditation applications. All institutes now need to submit their accreditation application through online system. No paper based application has been acceptable anymore.

In order to proceed with your online accreditation application institute need to contact IT department of NCEAC via email to amansha@hec.gov.pk .

VII. Field Audit Guidelines-Documents Required Regarding the Computing Program under Evaluation for the Accreditation

The following documentation should be available for the evaluation by the Inspection Committee

Category	Sub-Category	Document Required
Program	Curriculum Implementation/ Course Folder	A COURSE FOLDER/FILE will be required for each course of the respective program. The following information is to be documented in each folder/file: <ol style="list-style-type: none"> Course Objectives Course Contents Weekly plan of contents of lectures delivered

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- d. Attendance Record
 - e. Copy of lecture notes
 - f. List of Reference Material
 - g. Copy of assignments, quizzes, midterms and final examinations
 - h. Model solutions of all assessments tests given in (g) above
 - i. Three sample graded assignments, quizzes, midterms and final examination securing max, min and average marks
 - j. Marks distribution and Grading Model
 - k. Complete result of the course
 - l. Outcomes Assessment
 - m. Detail of technology involved
 - n. Design skills/techniques practiced
 - o. Complete analysis of effectiveness of course and level of silks ensured in:
 - Technology
 - Emerging Development Paradigms
 - Pertaining to Industry
 - Modeling and Design

Lab Component

If course has an additional credit hour pertaining to Lab, then an independent folder/file be maintained to provide the following:

- a. Lab Objectives
 - b. Lab Contents
 - c. Weekly plan of contents of lab lectures delivered
 - d. Attendance Record
 - e. Copy of material given to students
 - f. List of Reference Material
 - g. Copy of assignments, quizzes, examinations given in lab
 - h. Model solutions of all assessments tests given in lab
 - i. Three sample graded assignments, quizzes, and examination securing max, min and average marks
 - j. Complete result of the lab
 - k. Outcomes Assessment
 - l. Detail of technology involved
 - m. Design skills/techniques practiced
 - n. Complete analysis of effectiveness of
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	lab and level of silks ensured in:
	<ul style="list-style-type: none"> ▪ Technology ▪ Emerging Development Paradigms ▪ Pertaining to Industry ▪ Modeling and Design
Effectiveness of Overall Program	<p>Complete analysis of effectiveness of program and summary of level of silks achieved in the following domain:</p> <ul style="list-style-type: none"> ▪ Technology ▪ Emerging Development Paradigms ▪ Pertaining to Industry ▪ Modeling and Design
Students Evaluation of Course and Instructor	Record of how students have been evaluating both course and instructors in particularly all courses taught by the permanent faculty
Class Schedule	Complete Academic Year
Lab Schedule	Complete Academic Year
Senior Design/ Graduating Project	<p>Summary of all senior design/graduating projects comprising of the following:</p> <ul style="list-style-type: none"> ▪ Scientific areas/applications covered ▪ Emerging Technologies used ▪ Correlation with the industrial practices and trends ▪ Project Reports ▪ Project Demos
Alumni Data Collection	<ul style="list-style-type: none"> ▪ Statistics on entry and graduation of all students in the respective program ▪ Record regarding placement in industry of graduates from the respective program ▪ Record of placement of graduates in international and national universities for higher education
Faculty Contracts	A record of offer/contract letters issued to all permanent faculty members
Admission and Eligibility	<ul style="list-style-type: none"> ▪ Admission procedure/policy and eligibility ▪ Previous data on admission ▪ Student strength and dropout
Annual Budget	A copy of current annual budget
Labs	Complete inventory, schedule and relevant manual of all labs relevant to the respective computing program

Rules & Regulations, Statutes and Procedures	<p>All approved rules & regulation including the following:</p> <ul style="list-style-type: none"> ▪ Admissions ▪ Registrations ▪ Examinations ▪ Academic probations ▪ Discipline ▪ Faculty hiring, evaluation and promotion ▪ Revision of curriculum
Financial Profile	<p>A survey of total investments made on the program under evaluation since its inception involving:</p> <ul style="list-style-type: none"> ▪ Human Resource including Faculty Staff, Administrative and Supporting Staff ▪ Office Equipment ▪ Labs/Technology ▪ Infrastructure ▪ Library/Books ▪ Allied facilities

VIII. Field Audit Guidelines - Audit Schedule

Time	Activity
09:00 – 09:15	<p>Meet Dean of the Program</p> <ul style="list-style-type: none"> ▪ Explain aim of the visit ▪ Describe the audit process
09:15 – 09:30	<p>Meet HOD of the program</p>
09:30 – 10:15	<p>Presentation</p> <ul style="list-style-type: none"> ▪ Program Goals ▪ Curricula Summary ▪ Faculty Summary ▪ Student Summary ▪ Infrastructure Summary ▪ Alumni Summary ▪ Q/A <p>Members</p> <ul style="list-style-type: none"> ▪ HOD ▪ All Faculty
10:15 – 11:30	<p>Faculty Meeting</p> <ul style="list-style-type: none"> ▪ Around 10 min per faculty ▪ Graduation ▪ Personal Background ▪ Area of Interest

	<ul style="list-style-type: none"> ▪ Perception about the program, Students and peers ▪ Opportunities for professional growth ▪ Research opportunities ▪ Salary perception ▪ Teaching Load
11:30 – 12:30	Infrastructure Visit <ul style="list-style-type: none"> ▪ Lab Audit ▪ Library ▪ Classrooms ▪ Faculty Offices
12:30- 1:30	Course Audit <ul style="list-style-type: none"> ▪ Course file ▪ Attendance ▪ Teaching Log ▪ Examination Record ▪ Sessional Record ▪ Evaluation Instruments ▪ Projects
1:30-2:00	Zuhar Prayer+Lunch
2:00 – 3:00	Classroom Visit <ul style="list-style-type: none"> ▪ Two classrooms 30 min each ▪ Student Interview ▪ Student Assessment ▪ Student Perception ▪ Student Feedback
3:00 – 4:00	Forms Filling
4:00 – 4:30	Meeting with Dean / Exit Meeting <ul style="list-style-type: none"> ▪ Findings ▪ Recommendations
4:30	Compilation of Final Reports by AIC