Expected Workshop Program

10:00 am to 11:15 am – NCEAC and the Accreditation Process - (Chp. 1 and 2)

11:15 am to 11:30 am – Tea

11:30 am to 12:45 pm - Accreditation Standards and Criteria - (Chp. 3)

12:45 pm to 2:00 pm - Zuhr Break and Lunch

2:00 pm to 3:30 pm - Accreditation Standards and Criteria (Cont'd) - (Chp. 3)

3:30 pm to 4:00 pm – Asr Break

4:00 pm to 4:15 pm - New CVF

4:15 pm to 4:45 pm – Filling the CVF - Demonstration by Syed Usama Ali

4:45 pm – Closing إن شاء الله

NATIONAL COMPUTING EDUCATION ACCREDITATION COUNCIL (NCEAC)

by

Professor Dr Mohammad Ali Maud

December 2023

بِسْمِ ٱللَّهِ ٱلرَّحْمَـٰنِ ٱلرَّحِيمِ

Part 1

General Introduction to Accreditation

Introduction

- Higher Education Commission (HEC) of Pakistan was established on 11th September 2002 by promulgation of Ordinance LIII OF 2002.

- HEC as per Article 10 Sub-Section 1(e) has been authorized to set up national or regional evaluation councils or authorize any existing council or similar body to carry out accreditation of programs by giving them appropriate ratings.

Evolution of NCEAC

- National Curriculum Revision Committee (NCRC) constituted for Computing programs by HEC was tasked to initiate work on setting computing standards to be followed by Degree Awarding Institutions (DAIs).

- Computer Science/ Computing NCRC carried out the necessary spade work in 2003 and 2004. The NCRC, in its recommendations, suggested a comprehensive mechanism to grant accreditation to computing related degrees/disciplines in Pakistan.

- Considering the recommendations of NCRC, HEC established the National Computing Education Accreditation Council (NCEAC) February 16, 2005.

Evolution of NCEAC (Cont'd)

- NCEAC the first council to be established by HEC for accreditation of academic programs offered in the country.
- Professor Dr Aftab Ahmad was appointed as its first Chairman.
- Contributions of Professor Dr Aftab Ahmad in raising the council to its present status are gratefully acknowledged, and we pray to Allah for his health and well being.

What is Accreditation?

- Accreditation is an evaluation process.
- Accreditation is not a ranking system – as it doesn't compare institutions or programs.
- Accreditation is a process to validate the standard of an institution or an academic program. If standards are met, accredited status is granted by the appropriate agency.

What is Accreditation? (Cont'd)

- Academic evaluation of institutions and programs is being practiced in two ways in Pakistan:
  - By HEC itself: Evaluation of the universities as educational institutions.
  - By respective Council formed by HEC: Accreditation of university programs like NCEAC for Computing programs.

Need for Accreditation

- The need and demand for accreditation of computing programs in Pakistan has arisen because of the expansion in the number and diversity of such educational institutions and programs.

- Higher education is a **global phenomenon**, the process of the accreditation is crucial for a computing graduate who will go abroad for further studies or job.

- The accreditation shall provide an opportunity to the accredited program to be recognized nationally and internationally.

- The accreditation of Computing program will be compulsory after August 2024.

Advantages of Accreditation

It serves to provide information to:

- Parents and prospective students that a program is meeting minimum standards.
- The faculty and administration of the DAI about the program's strengths and weaknesses and of ways to improve the program.
- Employers that graduates are prepared to begin professional practice.

Advantages of Accreditation (Cont'd)

- The Taxpayers that their funds are rightly spent; and
- The public that graduates are aware of public health and safety considerations.
- The institution may use its accreditation status as a marketing tools.

HEC Policy Guidelines to NCEAC

- Accreditation shall be a mandatory process for all relevant academic programs offered by public and private sector institutions.
- All institutions in Pakistan, which grant a Recognized Computing Qualification, must apply to the Council to have such qualification accredited.
- Accreditation will be carried out under the umbrella of HEC and via the National Computing Education Accreditation Council.
- The Council shall publish a list of Accredited Programs as prescribed.

HEC Policy Guidelines to NCEAC (Cont'd)

- The Recognized Computing Qualifications granted by institutions recognized by the respective authorized bodies outside Pakistan shall also be recognized by the Council as per need in case of Pakistani graduates of a computing program.

- Every institution in Pakistan which has an Accredited Program shall furnish such information as the Council may, from time to time, require as to the courses of study and examination to be undergone in order to obtain such Recognized Computing Qualification.

- The Council shall appoint such number of Program Evaluators (PEs) as it may deem requisite to attend at any or all of the examinations held by the institutions in Pakistan for the purpose of granting Recognized Computing Qualifications which are accredited or in respect of which accreditation has been sought.

Accreditation Objectives

Accreditation is useful for the following purposes:

- Guidance to DAIs for Improvement
- Ease Transfer of students between universities
- Recognition of Qualifications
- Increase Employer Confidence

Accreditation Objectives (Cont'd)

To ensure:

- value-addition in transforming students admitted to the program into capable computing professionals.
- that graduates of the computing accredited programs achieved all attributes set by the NCEAC.
- that the graduates of computing accredited programs possess all necessary technical skills required by the job market.

Accreditation Objectives (Cont'd)

To ensure:

- that the quality of resources at the institute which offers computing accredited programs, are up to the mark to award degree in computing disciplines.
- that the curriculum of accredited computing programs is designed and executed as per NCEAC standards and criteria.
- continuous improvement in the computing programs through accreditation and re-accreditation process.

Scope of Accreditation

Four (4) years BS degree programs in:

1. Artificial Intelligence
2. Bioinformatics
3. Computer Science
4. Computer Engineering
5. Cyber Security
6. Data Science
7. Information Systems
8. Information Technology
9. Multimedia and Gaming
10. Software Engineering

Composition of NCEAC

Consists of the following members nominated by the Controlling Authority namely:-

a. The Chairperson. b. The Vice-Chairperson

c. A Representative of Higher Education Commission (ex-officio).

d. A Representative of Ministry of Science and Technology (ex-officio).

e. A Representative from Ministry of Information Technology and Telecommunication (ex-officio).

f. One Representative each from Provincial Education/Information Technology Departments (ex-officio).

g. Four members from leading software industry in the following manner (ex-officio):

   i. Chairman Pakistan Software Export Board.
   ii. President Pakistan Association of Software Houses.
   iii. Two representatives from the software industry preferably with a strong academic background.

h. Six members, being computing professionals.

Accreditation Standards Committee (ASC)

The main function of the Accreditation Standard Committee (ASC) is to review reports received from the Program Evaluators (PEs) after a field visit.

The ASC consists of the following members who are also members of the General Council.

a. The Chairperson.
b. The Vice-Chairperson.
c. A Representative of Higher Education Commission (ex-officio).
d. Two Representatives from Software Industry.
e. Six Members of Computing Professionals.

Accreditation Inspection Committee (AIC)

- During an accreditation visit, an Accreditation Inspection Committee (AIC) is formed with a convener and member.
- A Program Evaluator (PE) qualifies to be appointed as Convener if he/she has evaluated at least four programs on behalf of NCEAC.
- The General Council of NCEAC approves the appointment as PE. The criteria for selection of PE is as under:
    - PhD degree in computing or a related discipline.
    - At least five years of post-PhD experience.
    - Good professional repute.
    - Taught for at least three years in a NCEAC accredited computing program.
    - Must be residing/working in Pakistan.

- The GC of NCEAC may appoint more than one member in AIC if required.

Eligible Institutions

- Institutions chartered by Federal or Provincial Governments.
- Institutions affiliated by the chartered universities or degree awarding institutions (DAIs).
- Institutions offering degree programs under affiliation/collaboration with foreign universities under the approval from HEC.
- Institutions that operate a branch campus under the direct supervision and control of the main campus, and conduct program that is substantially equivalent to the one located on the main campus.
- When a multi-campus institution presents programs for accreditation, each campus will be considered as a separate institution in the evaluation process.
- Any other Institute recognized by HEC to offer degree programs.

Types of Visits

Visit Type	Purpose
Zero Visit	Required for those Institutes who are launching a new computing program
Accreditation Visit	Conducted in the final year of those batches, which are going to be graduated
Confirmatory Visit	Conducted when an institute has reservations on the NCEAC General Council's decision regarding the outcome of their accreditation, and has applied for a confirmatory visit
Change of Sccope Visit	Conducted when an institute desires to change the number of intake of a specific program that was accredited by NCEAC

Appeal Cases

- In case there are any grievances, the Institute has the right to make an appeal to the NCEAC General Council for review.

- The decision of the General Council on the appeal will be considered to be final.

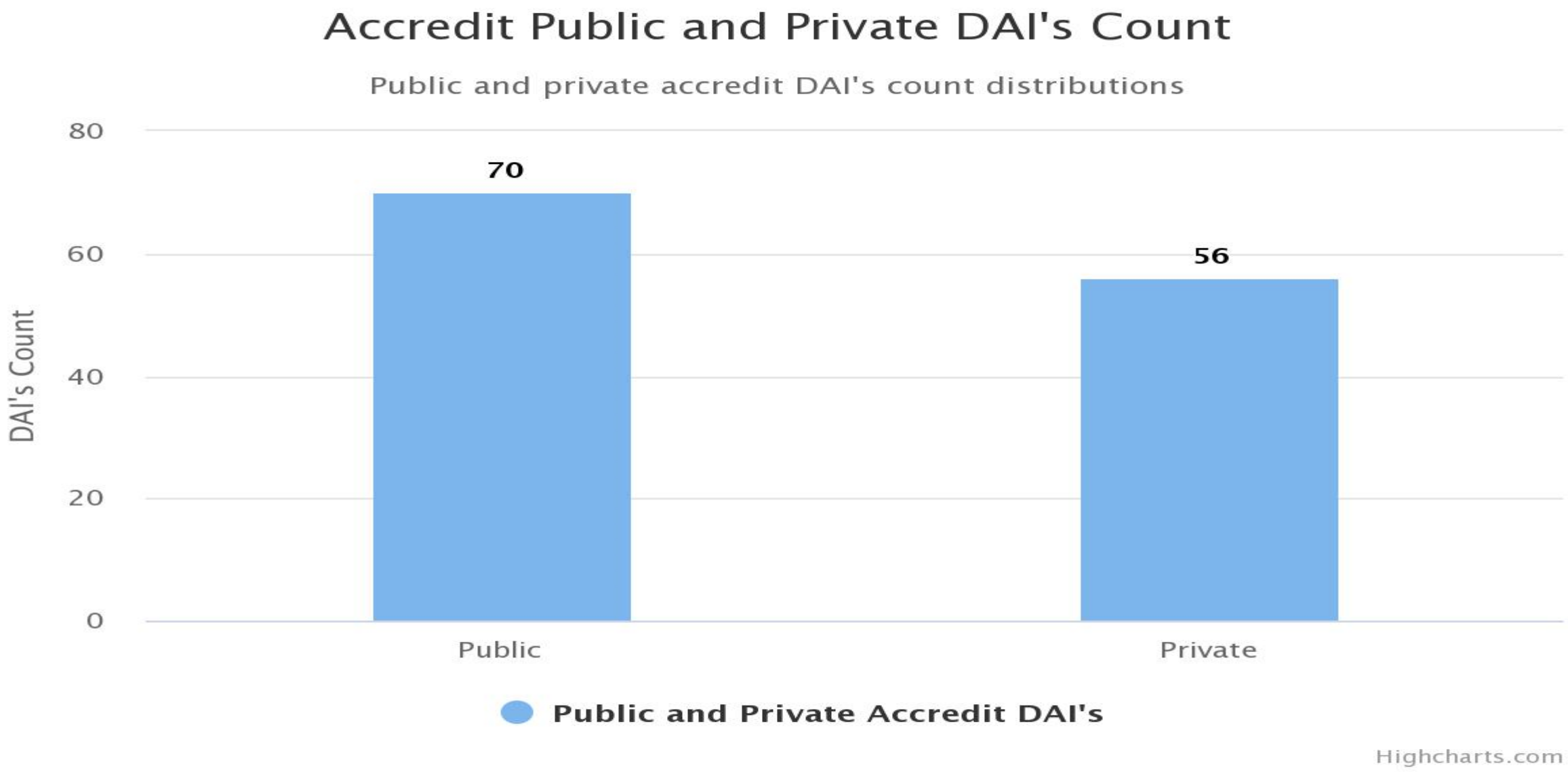
NCEAC Accreditation Progress

- Various Statistics are given on next slides to express the strength of the NCEAC at Pakistan.

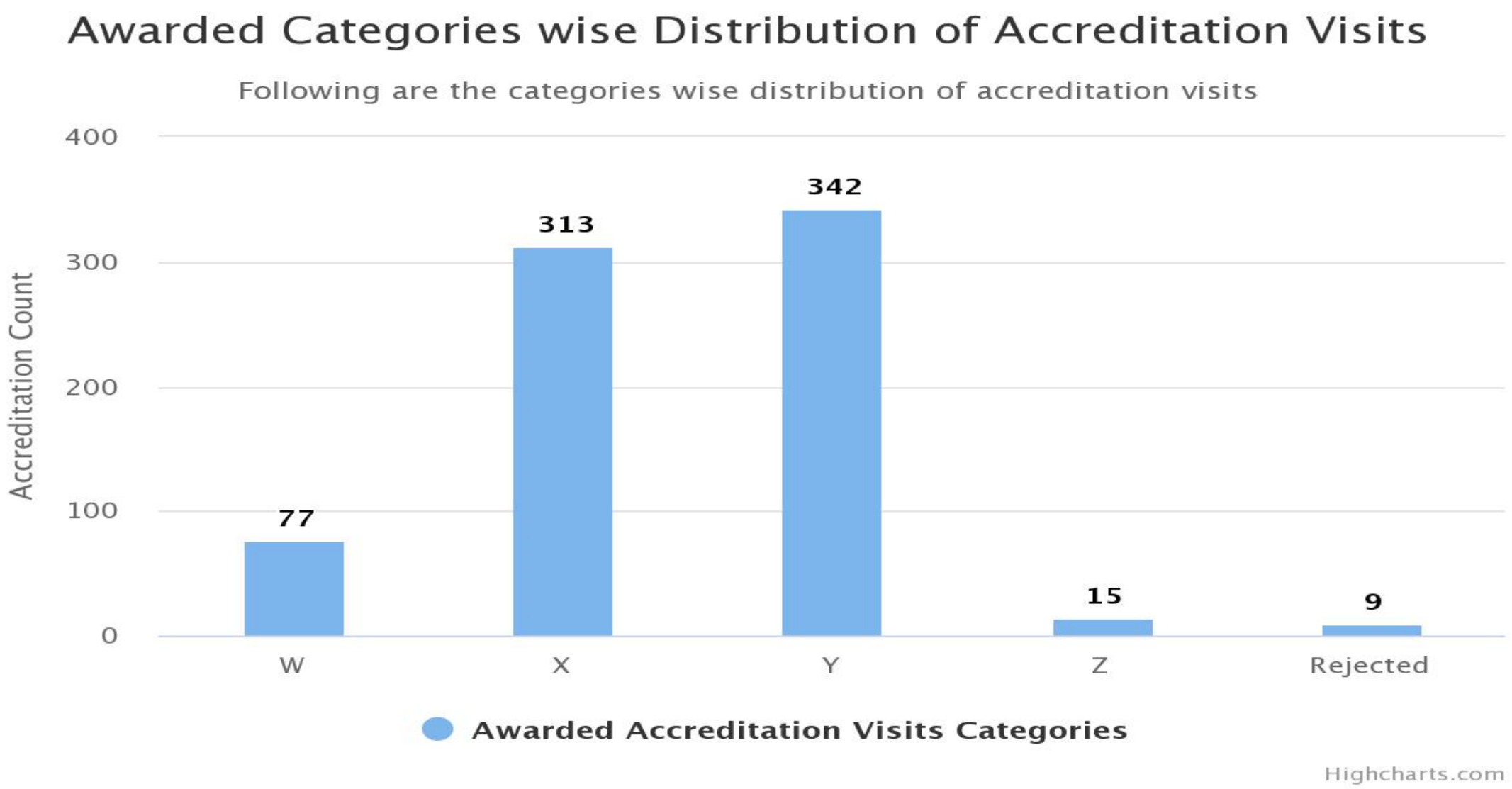
- List of all accredited institutes, number of students, evaluator and many other data.

Historical trends

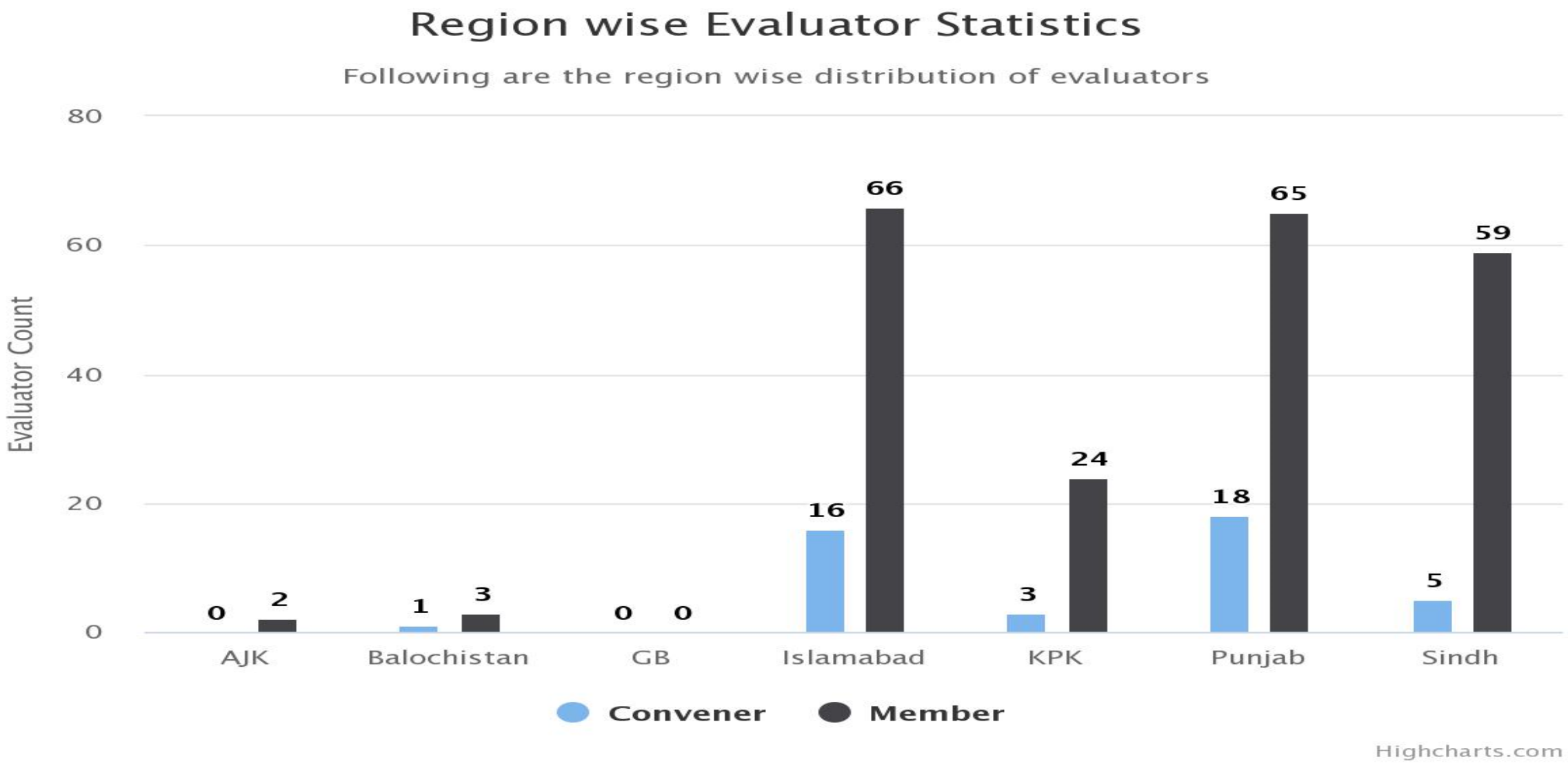
No. of Accredited Institution in Pakistan



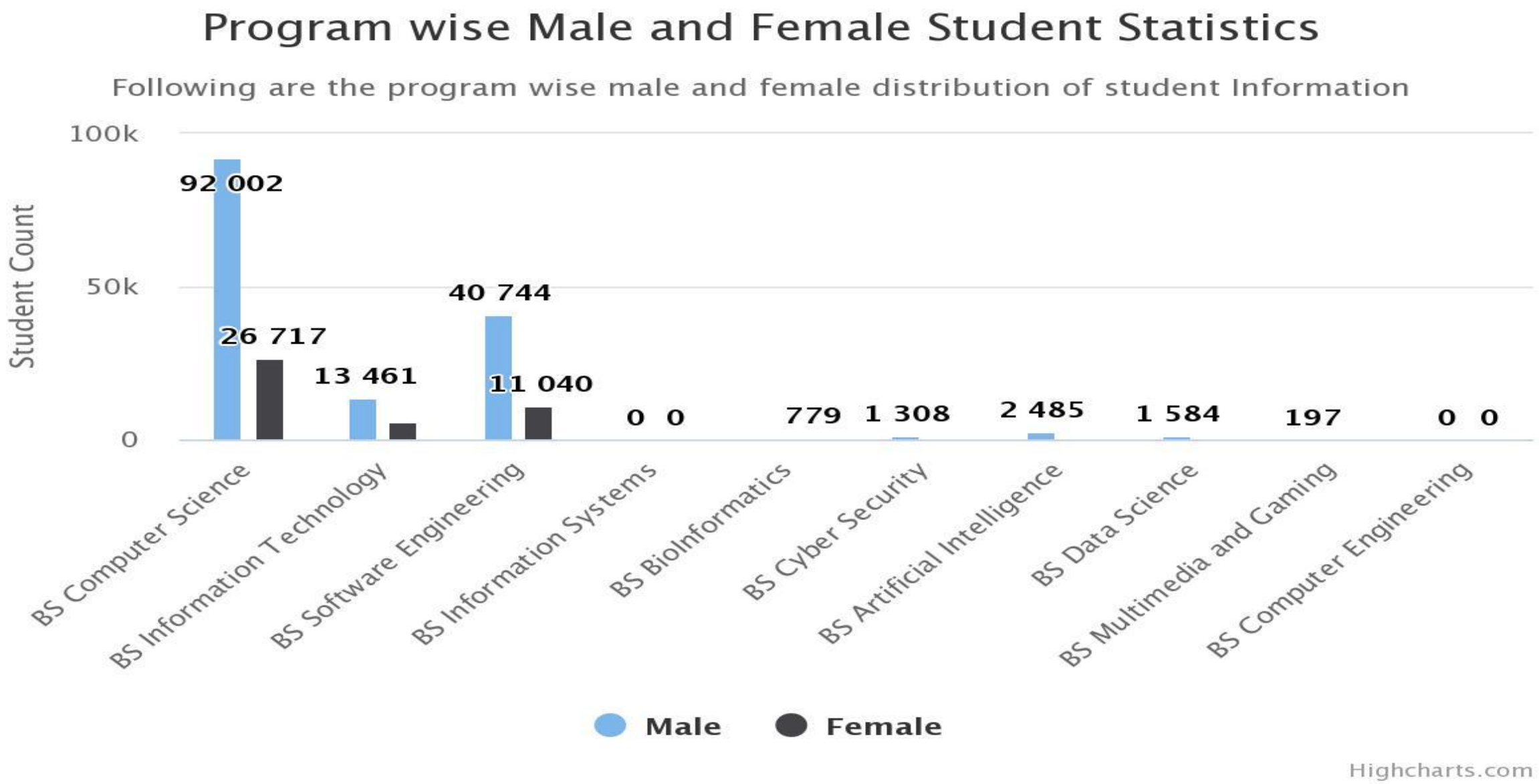
Statistics of Categories awarded



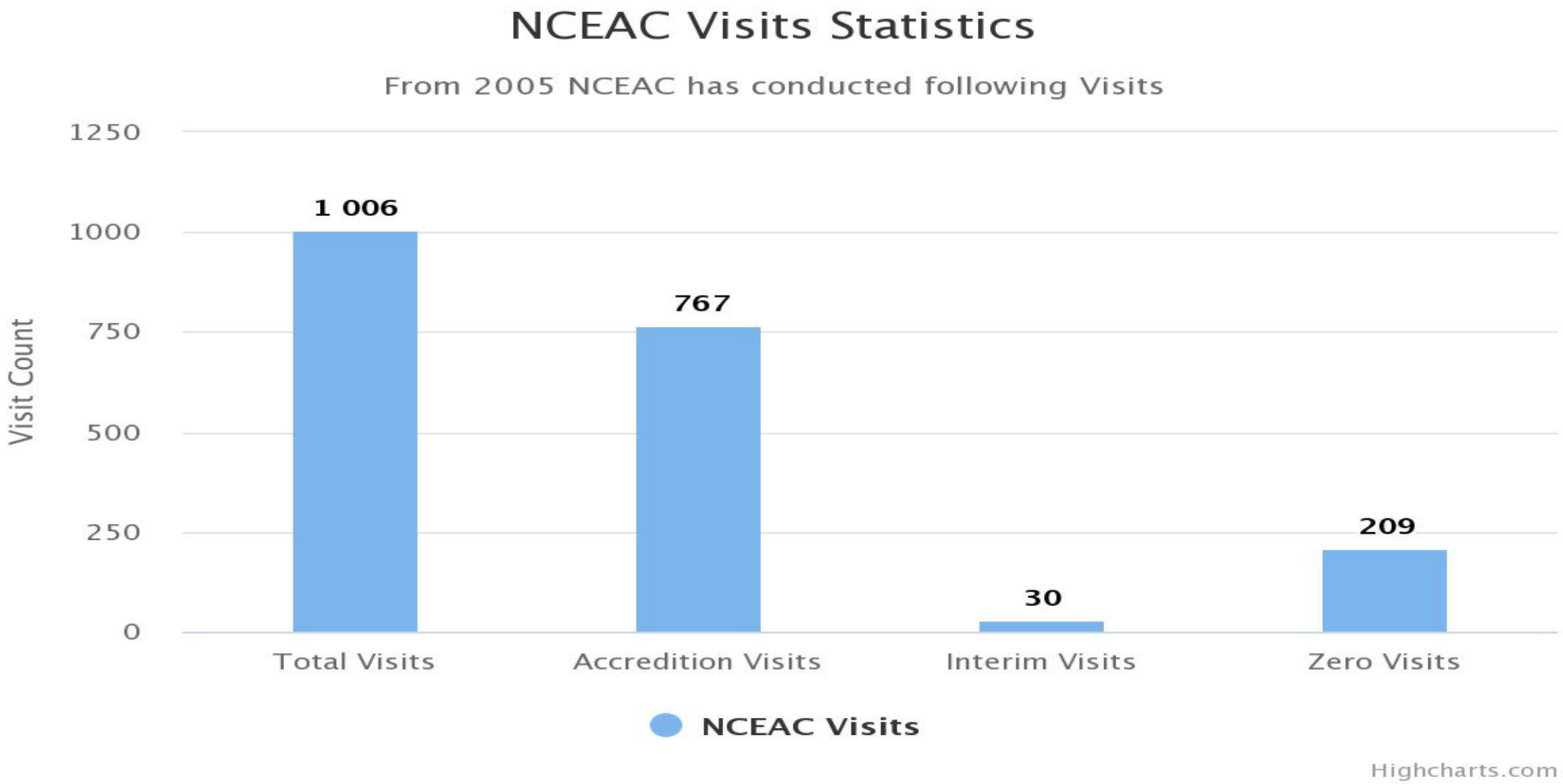
Region-Wise Evaluators



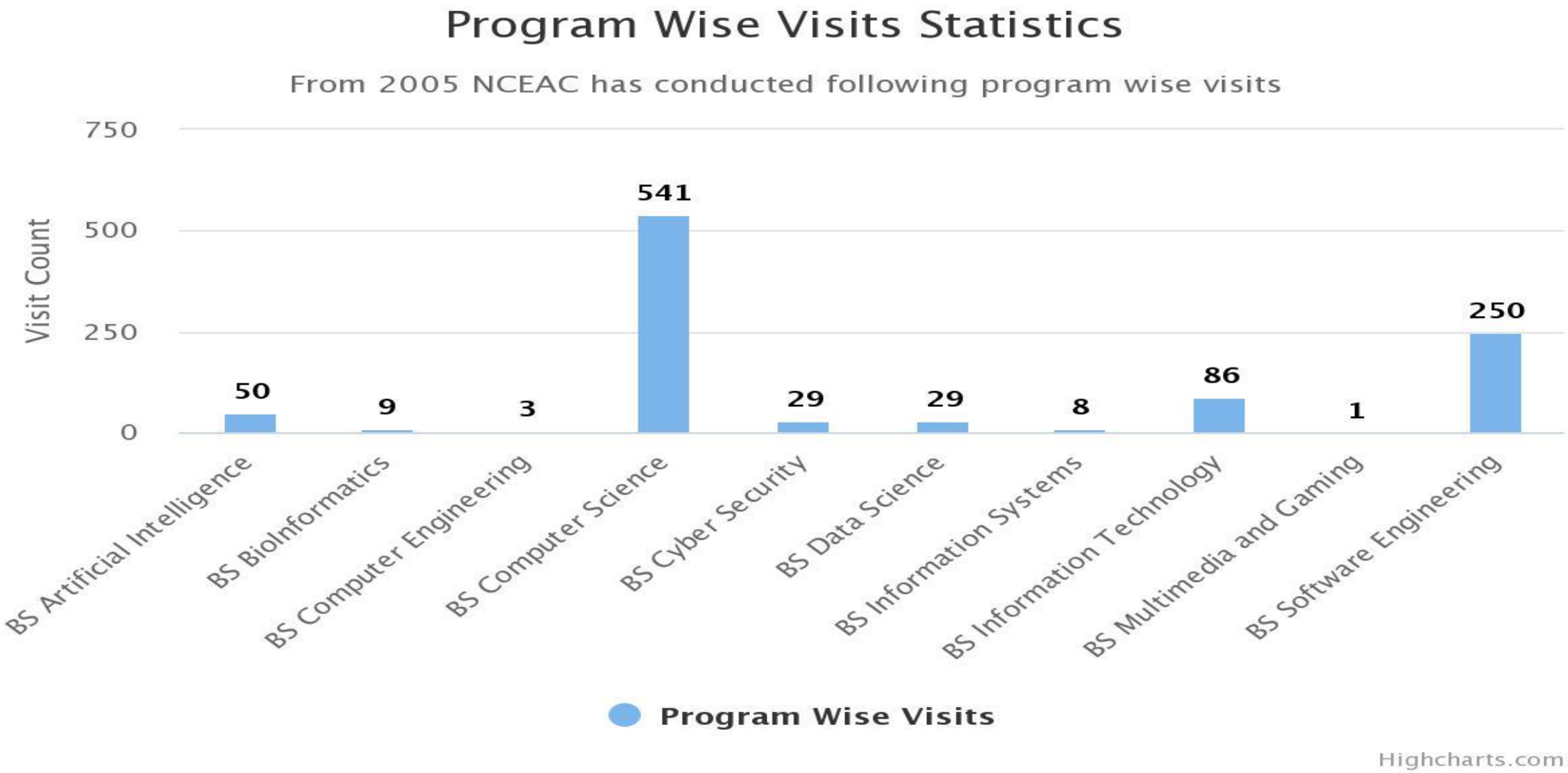
Program-Wise Students



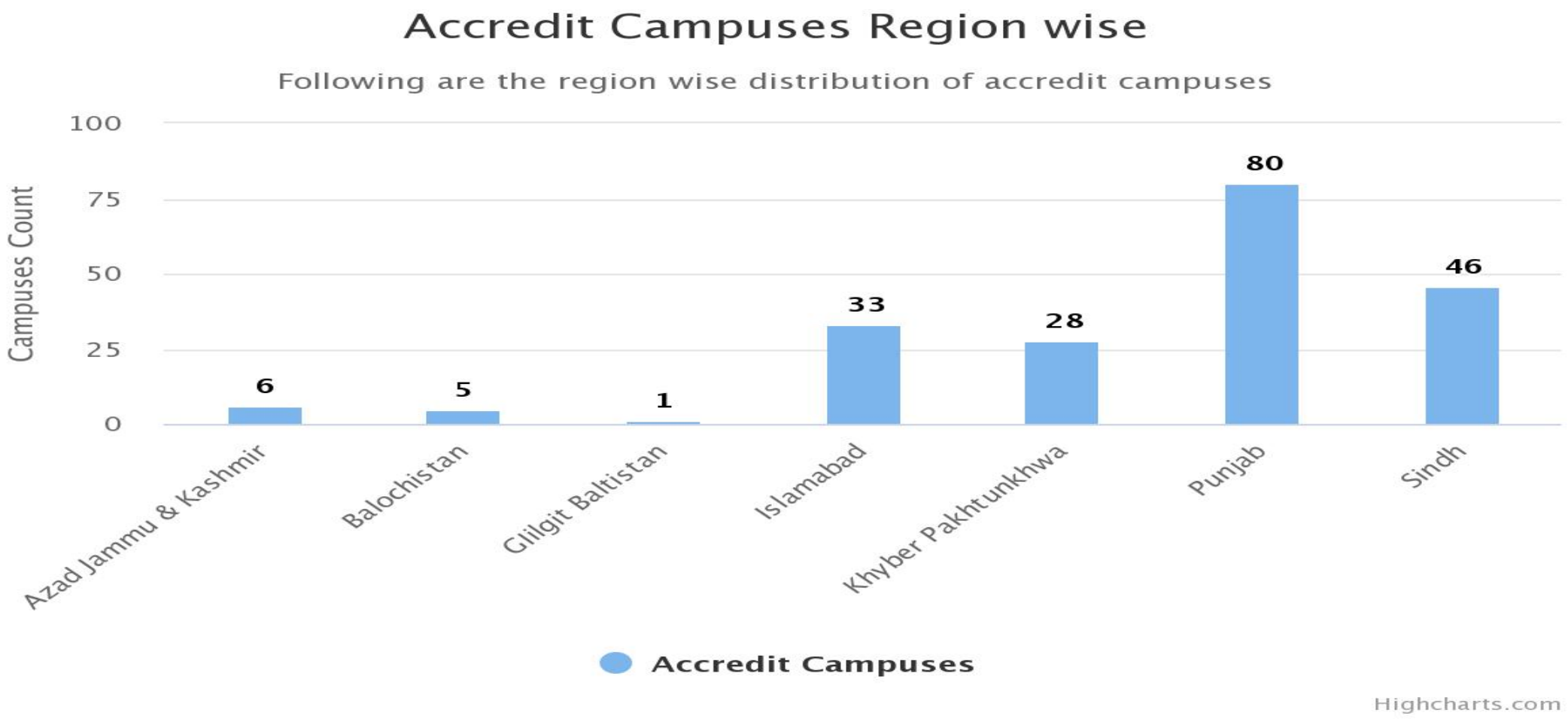
Visits Statistics



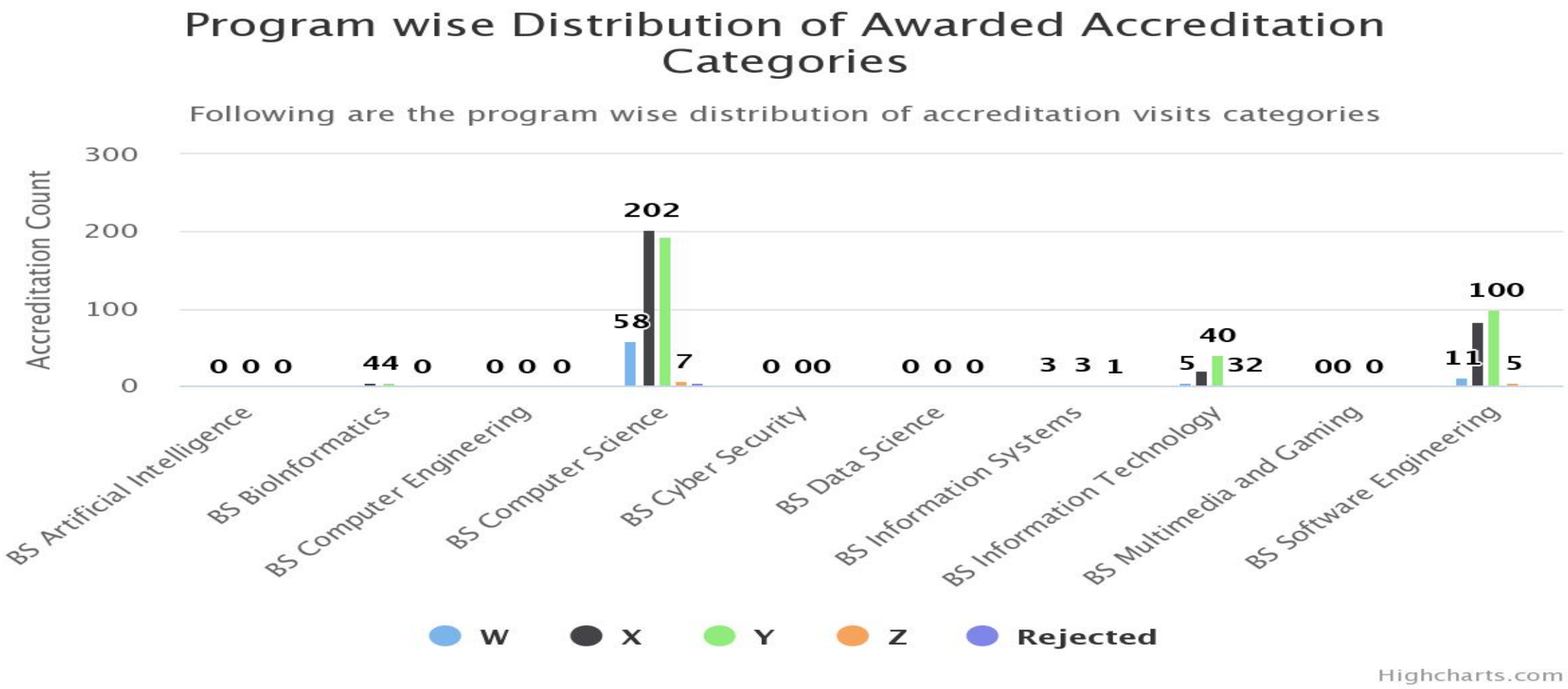
Program-wise Visits



Accredited Campuses – region-wise



Program-wise categories



Part – 2

NCEAC - Accreditation Process and Procedure

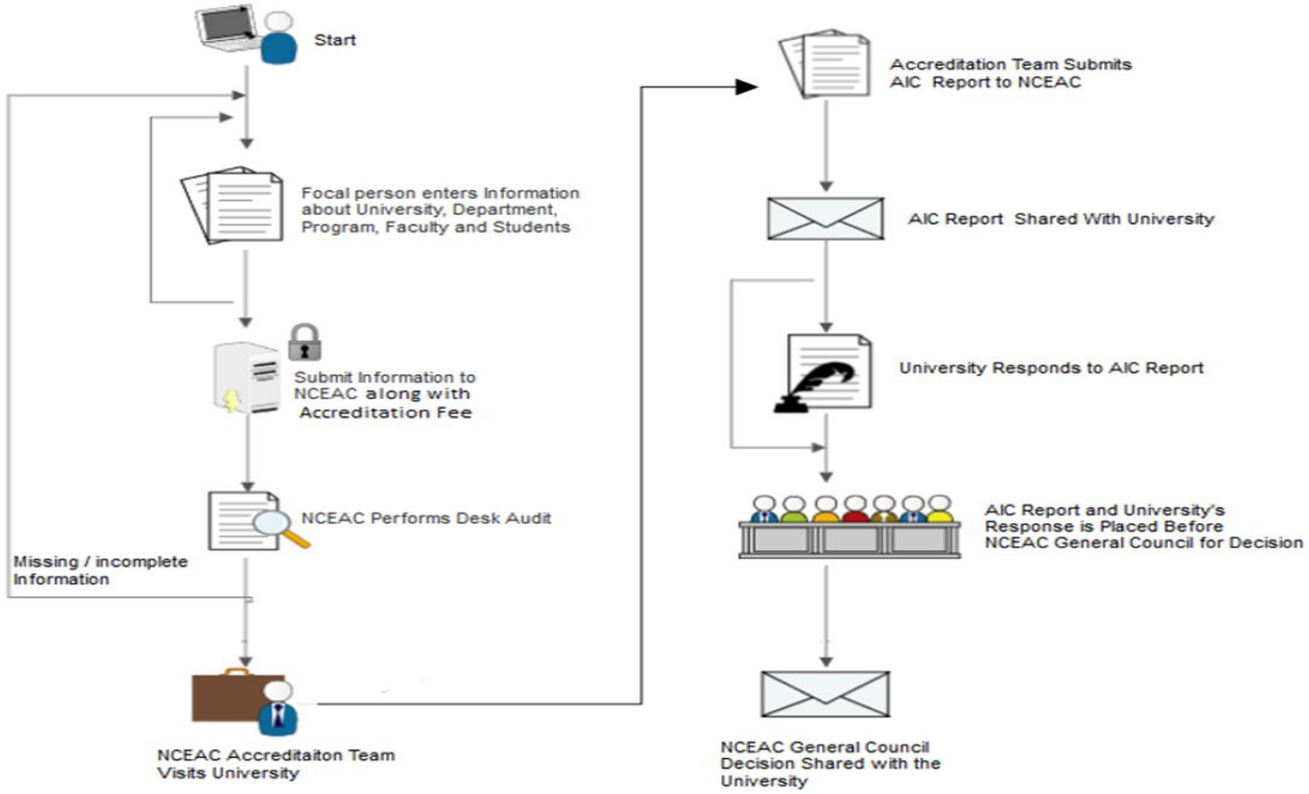
Accreditation Process

- NCEAC has launched its online Accreditation Automation System (AAS) for accepting Self Assessment Report (SAR)/ Accreditation Application of the institute.

- The AAS is available on the URL https://accredit.nceac.org.pk

- All institutes are required to submit their SAR/ Accreditation application through AAS.

Accreditation Process (Flow Chart)



Qualifying Requirements

a. Applicant institution must satisfy the legal status/requirement of the relevant bodies, specifying the particular legal arrangements as a Charter/Degree Awarding Institution (DAI), Constituent or Affiliated institution, or any other type.

b. A minimum of 130 credit hours as per the NCEAC requirements. These 130 credit hours must be offered over a period of four years (8 semesters). The HEC criteria for the semester system must be followed.

c. Final year project (minimum 6 credit hours).

d. Full-time computing faculty complying with the standard stated in Chapter 3 of this manual.

e. Progress on Compliance Report on the last NCEAC-AIC visit observations/General Council decision.

Field Audit Visit

- The main event in the accreditation process is the field visit which is sometime referred to as Field Audit Visit.
- A field audit visit is a comprehensive audit conducted by the Accreditation Inspection Committee (AIC) of the program which is seeking accreditation.
- The AIC report is the major outcome of the visit that is submitted to the Council for evaluation and decision.
- The report is evaluated by the Accreditation Standard Committee (ASC) to make a final recommendation regarding the accreditation of the program.

Composition of AIC

- For every visit, NCEAC constitutes an Accreditation Inspection Committee (AIC) to conduct the filed visit and evaluate the program under accreditation.

- The AIC comprises of the Convener and one or two Members along with NCEAC Staff. Credentials of the team members are stated as under:

AIC Convener

- Senior and experienced PhD level Program Evaluators with PhD in relevant field along with experience of minimum 4 accreditation visits are appointed as convener of the AIC.

- AIC Convener is chosen from those who are working in HEC recognized reputed HEI.

Composition of AIC (Cont'd)

AIC Member

- NCEAC approved Program Evaluator who is serving in HEI and holding a PhD in relevant field with at least 3 years of Post PhD teaching experience are appointed as member of AIC.

NCEAC Representative

- NCEAC Representative from NCEAC Secretariat.

Role of AIC Convener

- The Convener of the Visiting Team has the overall responsibility for the accreditation visit.
- The Convener assigns duties to each team member keeping in view the overall perspective.
- He/she is familiar with the accreditation process and gathers in advance earlier reports, if any.
- He/she has the responsibility for the preparation of the consolidated team report and its timely submission for the consideration of the ASC and GC.

Duration of Visit and Visit Plan

- Normally, the visiting team requires one or two days on-site for field audit visit to complete the evaluation of a program. The duration may be changed by NCEAC depending on the scale of the visit.

- The accreditation manual describes the plan of visit and the responsibilities of the institution in this regard.

Presence of Stakeholders

The following stake holders are required to be present during the Field Visit.

- Head of the Institute (Vice Chancellor/Rector/Director/Principal)
- Dean of the Faculty concerned.
- Chairperson (Head of the Program)
- Director Quality Enhancement Cell or equivalent
- Teachers and Support Staff
- Students and Alumni of the Program

Provision for Withdrawal

- The institutions have the option to withdraw its accreditation application for a program during the accreditation process by a written request to the Convener of Accreditation Inspection Committee (AIC), after being informed of its strengths and weaknesses, but before the AIC holds formal discussion among its members for finalizing its report.

- However, the accreditation visit fee will be non-refunded.

AIC Report

- At the end of the evaluation visit, the AIC meets the Head of program or Vice Chancellor/Rector to inform him/her about their findings.
- Subsequently, the committee submits a comprehensive report through the online system.
- The report is communicated by the NCEAC to the Institute for comments with a deadline for submission of a rejoinder, if required.
- The comments from the Institute, if any, and evaluation report are placed on the agenda of the ASC meeting.

The Role of ASC and GC in the Accreditation Process

- The ASC examines AIC report along with the institution's rejoinder and recommends an accreditation category.

- ASC recommendations are submitted to the GC for final approval and endorsement to finalize the category of a proposed Program of Institute.

Accreditation Categories

The GC of NCEAC awards one of the following categories to the program based on AIC report.

- “W”
- “X”
- “Y”
- “Z”

Categories Explained

- “W” Category will be accredited for a period of four years.
- “X” Category will be accredited for a period of three years.
- “Y” Category will be accredited for a period of two years. Programs earning two consecutive “Y” categories and qualifying for “Y” category for the third time will be awarded “Z” category.

Categories Explained (Cont'd)

- "Z" category will NOT be permitted further intake of students. All batches enrolled at the time of AIC visit will, however, be accredited. Such institutes will have to apply for Zero Visit in case they decide to continue their computing program.

Zero Visit Recommendation

- The AIC, at the time of Zero Visit, will determine whether the facilities provided by the institute are in accordance with the NCEAC Standards for the number of students planned in its annual intake or not.

- Depending upon the type of deficiencies, the Council may ask the institute to comply with the observations of AIC and apply for confirmatory Zero Visit; or

- Ask it to prepare and file a fresh application for new zero after removing the deficiencies.

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