



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

ASANSOL ENGINEERING COLLEGE

VIVEKANANDA SARANI, KANYAPUR, ASANSOL,
713305

<http://aecwb.edu.in>

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Asansol Engineering College (AEC) is a self-financing institution that was established in 1998. It is located in Asansol, West Bengal, currently, offers nine undergraduate engineering programs, and three post graduate programs in various disciplines. The institute is approved by the AICTE and is affiliated to Maulana Abul Kalam Azad University of Technology (MAKAUT), formerly known as West Bengal University of Technology (WBUT). Moreover, AEC is recognized by the UGC under section 2(f) of the UGC Act, 1956.

It is worth noting that the institute holds the distinction of having three engineering (UG) degree programs accredited by the National Board of Accreditation (NBA). Furthermore, it has consistently been recognized as one of the top institutes in Eastern India by various ranking agencies.

The institute boasts a well-established Research and Development (R&D) cell that actively fosters collaborations, workshops, conferences, and seminars at both national and international levels. These endeavors receive strong support from the knowledgeable faculty members, dedicated students, and accomplished alumni. Furthermore, the institute takes great pride in its efficient Training and Placement (T&P) Cell, which tirelessly works throughout the year to ensure the best placement opportunities and career prospects for its students.

The presence of student chapters in various departments and diverse clubs within the institute plays a vital role in organizing informative technical events all year round. These events contribute to the overall development of the students and provide valuable insights beyond their academic pursuits.

In addition to academic endeavors, the institute places great emphasis on co-curricular and extra-curricular activities, recognizing their significance in nurturing well-rounded individuals. These activities foster the holistic development of the students and provide them with exposure to a wider world of learning.

Committed to its mission of excellence, AEC is widely acknowledged as a prominent hub of knowledge, attracting the finest talents across the country. The institute is known for producing exceptional students who consistently achieve top ranks in university examinations. The faculty members of the institute bring a wealth of diverse teaching and research experiences. The management team of the institute is philanthropic, prioritizing both social welfare and the education of their students.

Vision

To emerge as a centre of excellence, offering world class facility and ambience for advanced level of education and research to serve the society.

Mission

1. To create an ambience for advanced level of teaching and learning process.
2. To generate new ideas by engaging in cutting-edge research and technology.
3. To initiate collaborative projects which offer opportunities for long term interaction with industry and

academia.

4. To develop intellectual human potential for serving the society according to the regional, national and global needs.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

1. One of the oldest self-financing institute in the state of West Bengal with strong foundation established by social reformers.
2. Highly experienced and dedicated faculty members and staff with high retention rate.
3. Fully Wi-Fi enabled campus with ICT enabled classroom.
4. Excellent career guidance services and remarkable success in securing high placement opportunities for its students.
5. Student-friendly, gender-sensitive and eco-friendly campus.
6. Three courses are accredited by NBA, New Delhi.
7. Mandatory Skill Enhancement Training for every student in each semester in addition to curriculum.
8. MoU with one of the world's leading online education organisation, Coursera, and offer their MOOCs to students and faculty members at free of cost.
9. Established local chapter under NPTEL and providing the platform to students for AICTE Internship program.
10. Repository of video lectures of each courses prepared by faculty members for remote access.
11. Research excellence award offered to students, faculty members and staff.
12. Decentralized administration for effective governance.
13. Harmonious relationship among the members of the management, faculty members and staff, students and parents.
14. Holistic development of students through various Extra and Co-curricular activities.

Institutional Weakness

1. Few number of research projects especially from the funding agencies like AICTE, DST, UGC, DRDO, ISRO, MHRD etc.
2. Although there has been an overall increase in gross enrollment of students, the low enrollment rate in core departments is a matter of concern.
3. While the institute has successfully secured placement offers for over 80% of its students, there is an ongoing effort to further encourage placements in Core Companies and non-IT sectors.
4. As the institute is affiliated to Maulana Abul Kalam Azad University of Technology (MAKAUT), there are certain limitations in modifying the curriculum.

Institutional Opportunity

1. Initiatives in Research and consultancy.
2. Locational advantage for strengthening academia-industry linkages.
3. Increasing in revenue generation through resource sharing.
4. Faculty and student exchange programs with foreign Organizations.

5. A more proactive alumni association to enhance the employability of the students.
6. Initiatives can be taken in publishing more peer reviewed research journals.
7. NBA accreditation for all eligible programs.

Institutional Challenge

1. To increase placements in core industries
2. Staying abreast of the swift advancements in higher education and technology.
3. Mushrooming of private Engineering and Polytechnique institutes in Asansol – Durgapur region.
4. To get more research funding from external agencies.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Asansol Engineering College is an affiliated institution of Maulana Abul Kalam Azad University of Technology (MAKAUT). The institute ensures strict adherence to university regulations, curriculum, and syllabi, effectively implementing them. The syllabus is meticulously developed by the Syllabus Committee and Board of Studies of MAKAUT, taking into account the principles outlined by AICTE, UGC, and NEP2020. The curriculum incorporates important cross-cutting issues such as gender equality, human values, professional ethics and environmental sustainability along with its proportionate weightage to core courses. University actively seeks stakeholders' input to identify and address any gaps in the curriculum. We contribute our suggestions through our representative in the Board of Studies of the University.

The institute offers beyond curriculum value added courses (161 in last five years) and MOOCs courses based on identified curricular gaps for the self-development and professional skill enhancement of the student. Apart from that, students' knowledge is enriched through experiential learning like field work, project work, internship etc.

Asansol Engineering College follows a three-tier academic teaching-learning process. The university publishes an Academic Calendar, based on which the institution prepares a comprehensive semester-wise Institutional Academic Calendar. This academic calendar incorporates all academic events including schedule for internal assessment, extra-curricular and co-curricular activities to be conducted throughout the semester. To effectively disseminate the plan, individual departments develop their own Academic Calendar. The content delivery process is continuously reviewed and monitored under the supervision of the Departmental Academic Committee (DAC). This ensures that the curriculum is delivered in an efficient and organized manner, taking into account the specific needs and requirements of each department.

The inputs from various stakeholders of the Institution such as students, alumni, academicians and employers are periodically taken, analyzed, and implemented for the overall growth of students. Quality in terms of academics, co-curricular and extra-curricular activities is enhanced with the proper guidance of the IQAC committee.

Teaching-learning and Evaluation

Our institution focuses on overall development of the students. Right from admission, the college follows a well-administered and transparent procedure with ease of availability of information on our website and notice boards. The admission of students is done according to the guidelines of the AICTE, MAKAUT and the Government of West Bengal. The student profile, which represents the student community's socioeconomic, cultural, and educational backgrounds, shows the institution's attempts to provide equity and wide access. The students: teachers' ratio is about 16:1. Student-centered pedagogies are developed at the departmental level through brainstorming sessions in order to foster critical and creative thinking among them. Teaching plans are prepared and followed as per academic calendar under the supervision of DAC. ICT based teaching learning mechanism in the institution makes the process easier.

Teachers are appointed against sanctioned post and sufficient number of faculty members with Ph.D is maintained in last five academic years. A robust and transparent evaluation system is practiced in the institution which is evident from the functioning of the examination committee, the evaluation mechanism, the grievance redressal mechanism etc. Programme Outcomes, Course Outcomes and Programme Specific Outcomes for all programs offered by the Institute are clearly stated and displayed on the college website and relevant areas. Students have passed out in the university examinations for the past five years with 100 pass percentage.

Research, Innovations and Extension

Asansol Engineering College promotes research activities to maintain quality education and research. R & D policy for the same has been framed which is available in the institute website. The institute provides financial support for the research by providing seed money and incentives for publications to faculty and students. The Institute has received a sum of Rs 58.50 lakhs as research grants in last five years from Govt. & Non- Govt. funding agencies for carry out research projects. To promote innovation and incubation, the Institute Innovation Council was formed in the year 2021 as per the guidelines of AICTE Innovation cell, Ministry of Education, Government of India. Faculty members have undergone the Innovation Ambassador training in the academic year 2021-22. A total of 43 workshops, seminars and webinars were organized to promote innovation activities. The Institute also conducts workshops/seminars on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and skills development in association with external resource persons. Faculty members of Asansol Engineering College have published 267 research papers in peer reviewed Journals, books, book chapters and conference proceedings. 22 patents were published in the last five years. Students, faculty and staff members of this institute promote extension activities in the neighborhood community through NSS to create a holistic environment. Initiatives like tree plantation, blood donation camp, Swatch Bharat Abhiyan, environmental awareness programs, women empowerment, youth empowerment, safe drive save life, motivational talks, visiting orphanage, old age home for help etc were conducted by the institute. Free vaccination camps (phase I and phase II) were organized for students, alumni, faculty and staff and their family members along with nearby locals. The institute has received several awards and recognition for extension activities from Government and Non- Government agencies during the last five years. A total of 14 MoUs has been signed with reputed organization for promoting research and collaboration activities.

Infrastructure and Learning Resources

AEC continuously upgrades its physical, academic, and technological infrastructure to keep abreast of changing times. It has taken great care in ensuring that the existing natural beauty is incorporated into its landscaping for

the campus and its buildings.

There are 64 classrooms with ICT facilities, 6 smart class rooms and 67 state-of-art labs, in addition to which the institute has 3 well-equipped seminar halls and 1 conference room.

All buildings of campus, hostels and staff quarters have the facilities for pure drinking water.

The Institute has the provision of necessary housing units and hostels for its students, faculty members and staff with appropriate vehicle parking space.

The institute has a state-of-the-art basketball court, and facilities for outdoor games like cricket, football, volleyball and indoor games like table tennis, badminton and carom. A fully equipped gymnasium with instructor and latest exercise machines is in existence.

The institute has central library with carpet area of 1207 sq.m. It has printed books of 66128 volume, e-books of 1150 volumes, 229 journals and magazines. The annual expenditure towards the purchase of books/e-books and subscription to journals/e-journals is INR. 13.19 Lakhs.

The number of computers available for student's usage during the latest completed academic year is 960 with student-computer ratio of 2.68:1. The computers are distributed in various laboratories of different departments. Every department is equipped with adequate number of computers having internet connectivity via LAN and Wi-fi. The current internet speed is 500MBPS. The institute is secured by a Sophos XG Firewall connected with all the computers. The entire campus of the institute is protected by over 200 CCTV cameras located at different locations. This provides 24x7 surveillance with 30 days backup facility. The entire IT infrastructure is being monitored through the Server Room. There are 16 Servers in the institute.

The Institute ensures optimal allocation and utilization of the available financial resources for physical & academic maintenance.

Student Support and Progression

Asansol Engineering College has a well-structured and organized student support and progression system. The institute supports the financially and socially challenged students to avail scholarships provided by the Government and non-Government agencies.

To enhance knowledge and skills of the students and to make them aware of recent trends in technology, the Institute encourages its students to participate in seminars, workshops, webinars, field studies etc. The Institute arranges capacity building and skills enhancement programs on soft skills, language and communication skills and life skills like yoga, physical fitness and health and hygiene activities to enhance values among students. The Institute inculcates different training/coaching programs through Training and Placement Cell for the students to make them competitive and Industry ready. An average of 70.67 % students are placed in organizations of repute Nationally and Internationally. Apart from it, a sizable number of students has opted for the Higher Educations and Entrepreneurships.

The Institute has well-structured student centric policies to handle issues against ragging with zero tolerance norms. At par with AICTE norms the institute has formed a Grievance Redressal Committee, Anti Ragging Committee and Internal Complaint Committee to act as a redressal machinery to handle grievances related

to Teaching – Learning, Sexual Harassments and Ragging.

The institute has a dedicated system to exercise cultural and sports related activities among the students to foster their holistic development. Our students have participated in several state/national level events and won medals/certificates/trophies/monetary awards as a token of appreciation.

The institute has its own registered Alumni Association which contributes financially/in hand support to make their Alma Mater strong. Annual Alumni Meet, seminars and workshops are conducted by the alumni association to enhance networking between the present students and the alumni.

Governance, Leadership and Management

Driven by its Vision and Mission, Institute has adopted a decentralized mechanism of governance which has been transformed into e-governance gradually over the time. The institute has its 5 years strategic plans which provides a strong base for the systematic and scientific way of leadership and management. Our governance fosters participative management and plays significant role in the evolutionary reforms to elevate the institute in preference of stakeholders.

Organic Structured committee under an established mechanistic structure of the institute is the important parameter of the strategic planning of AEC. Board of Governors, Head of the Institute, Departmental HoDs and different stakeholders are the part of decision-making process of this Institute.

One of the pillars of AEC is its strong IT based e-governance system which helps in smooth running of the Institute with software partner Hash technology. The ERP system developed by Hash technology is used in different domains like administration, finance and accounts, student's admission and support, training of students, video lectures collection for students, online Examination etc. AEC has Wi-Fi enabled campus with 75 access points, Firewall device with 500 Mbps leased line connection to augment the implementation of the IT measures.

An adequate number of faculty members and non-teaching staff undergo different Faculty Development Programme and Professional Development Programme. Faculty members are also sent to seminar, conferences and workshops for their academic development. The employees of AEC come under the welfare umbrella which includes medical insurance, allowances, on campus medical facilities, special leave for higher studies, financial support for attending seminar/conferences/workshop. Institute has well designed performance appraisal system for faculty and staff for fitness of promotion.

Adequate budgeting system is followed to make efficient and effective use of available financial resources. Regular audits are conducted to maintain a transparency in the monetary transactions of the institute.

IQAC aims at continuous enhancement of quality in teaching-learning process. Decisions taken by IQAC are vehemently supported by Management. IQAC along with college administration gives suggestions based on stakeholder's feedback to improve teaching-learning process. External and internal academic and administrative audit is undertaken periodically to improve institutional activities.

Institutional Values and Best Practices

AEC's core value is "Engaging Talents and Discovering Ideas," which focuses on empowering aspirants, employees, and society. The institute ensures gender equity through regular sensitization workshops and provides a barrier-free environment for disabled individuals. Energy-saving practices include the use of renewable sources and sensor-based LED lighting on campus. Collaborating with various agencies, AEC manages waste effectively, aiming to reduce pollution. Rainwater harvesting and water conservation efforts are also undertaken. A dedicated clean and green policy involves banning single-use plastics, promoting e-vehicles, and regular tree plantation, certified through green campus and energy audits. Beyond the campus, AEC conducts awareness programs on environmental issues and tree plantation to serve society. In fostering an inclusive atmosphere, the institute observes national and international remembrance days and festivals, promoting tolerance and peace amidst diverse cultures and socioeconomic backgrounds.

The institute has the best Practices like

1. Career Guidance and its impact on quality placement with following objectives

- i. To facilitate the students in technical skills that is on high demand.
- ii. To reduce the gap between industry and academia
- iii. To Broaden students' breadth of knowledge and horizons by applying the skills and knowledge that are beyond curriculum to complement their learning at the institution
- iv. To stimulate thinking, self-reflection, and self-understanding of students to promote their individual growth.

2. Community Development Initiatives with following objectives

- i. To foster gender parity programs and concerns regarding women's education.
- ii. To promote equality and social justice in the community by empowering people.
- iii. To enhance the participation towards environment protection thus moving a step ahead towards sustainable development.

Institutional distinctiveness of any institution is a culture practised in the organisation and evolves from the commitment to the organisational goal supported by the management, faculty involvement and ownership and commitment among all stakeholders towards achieving the organisational vision.

To foster Holistic development, AEC emphasizes on four-fold factors:

1. Balanced & All-Round Development
2. Enhancement Emotional Intelligence
3. Physical Wellness
4. Socio-cultural sensitivity

So that the students are at par socially, emotionally, physically, intellectually and spiritually.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	ASANSOL ENGINEERING COLLEGE
Address	Vivekananda Sarani, Kanyapur, Asansol,
City	Asansol
State	West Bengal
Pin	713305
Website	http://aecwb.edu.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Anilesh Dey	0341-2256334	9261778708	-	principal.office@a ecwb.edu.in
IQAC / CIQA coordinator	Gourisankar Panda	-	9434838129	-	gspanda@aecwb.e du.in

Status of the Institution	
Institution Status	Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	

State	University name	Document
West Bengal	Maulana Abul Kalam Azad University of Technology	View Document

Details of UGC recognition		
Under Section	Date	View Document
2f of UGC	16-07-2013	View Document
12B of UGC		

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)				
Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	View Document	07-07-2022	12	Extension of Approval

Recognitions	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	No

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Vivekananda Sarani, Kanyapur, Asansol,	Urban	16.76	48123

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BTech,Information Technology	48	Class Twelve	English	120	120
UG	BTech,Electrical Engineering	48	Class Twelve	English	60	32
UG	BTech,Mechanical Engineering	48	Class Twelve	English	60	29
UG	BTech,Civil Engineering	48	Class Twelve	English	30	5
UG	BTech,Computer Science And Engineering	48	Class Twelve	English	180	180
UG	BTech,Electronics And Communications Engineering	48	Class Twelve	English	120	110
UG	BTech,Computer Science And Business System	48	Class Twelve	English	60	49
UG	BTech,Artificial Intelligence And Machine Learning	48	Class Twelve	English	60	59
UG	BTech,Computer Science And Engineering Internet Of Things And	48	Class Twelve	English	60	46

	Cyber Security Including Block Chain Tech					
PG	Mtech,Electrical Engineering	24	Under Graduate	English	13	6
PG	MCA,Computer Application	24	Under Graduate	English	60	55
PG	Mtech,Electronics And Communications Engineering	24	Under Graduate	English	13	1

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	16				28				115			
Recruited	15	1	0	16	24	4	0	28	86	29	0	115
Yet to Recruit	0				0				0			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				24
Recruited	19	5	0	24
Yet to Recruit				0

Technical Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				41
Recruited	36	5	0	41
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	15	1	0	23	4	0	5	2	0	50
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	82	27	0	109
UG	0	0	0	0	0	0	0	0	0	0

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties					
Number of Visiting/Guest Faculty engaged with the college?	Male		Female		Total
	0	0	0	0	0

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	363	110	0	0	473
	Female	131	36	0	0	167
	Others	0	0	0	0	0
PG	Male	40	8	0	0	48
	Female	14	5	0	0	19
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years					
Category		Year 1	Year 2	Year 3	Year 4
SC	Male	22	24	18	22
	Female	8	4	3	11
	Others	0	0	0	0
ST	Male	3	1	5	15
	Female	0	0	5	1
	Others	0	0	0	0
OBC	Male	61	40	65	18
	Female	27	9	17	9
	Others	0	0	0	0
General	Male	435	450	471	461
	Female	154	135	102	140
	Others	0	0	0	0
Others	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Total		710	663	686	677

Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:	Asansol Engineering College is well-versed in advanced learning methodologies and remains up to date with evolving technological requirements. To ensure students are prepared for the latest industry needs, the college provides state-of-the-art technology equipment and modern laboratories. The faculty members empower students to find innovative solutions to challenging engineering problems. At present the institution is dependent on affiliating university for innovative and flexible curriculum. A very pulsating club activity in the institute brings together students from different wings to conduct various learning activities. Thus, in computer programming code context, Mechanical Engineering
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	<p>and Civil Engineering students join together with students from Electronics and Communication Engineering, Computer Science and Engineering, etc. Students are exhilarated to undergo minor projects in the Multidisciplinary/ Interdisciplinary mode by forming teams from dissimilar courses. In this way, kernels of multidisciplinary education are propagated. Thus new courses like Computer Science & Business Systems (CSBS), Artificial Intelligence & Machine Learning(AIML), Internet of Things & Cyber Security Including Block Chain Technology(IOT&CSIBT) have been started in full swing in the institute.</p>
2. Academic bank of credits (ABC):	<p>This institute is affiliated to the Maulana Abul Kalam Azad University of Technology, West Bengal (MAKAUT) and there are certain issues where the institute abides by rules and regulation of the University. The institute has been waiting for the University's proposal of ABC. The institute agrees in principle with the ABC. We are in the course of evolving a system for execution of ABC in proper way.</p>
3. Skill development:	<p>The institute has in-house facility to nurture the students and transform them into a competitive skilled engineer .This is institution's Fishing School Program (FSP).The FSP has been integrated with main curriculum to enhance the skill of students. Another catalyst for skill development in the institute is internship programmes. The basic principle of NEP, turning degree-holders into endowed personalities is being followed. Start-up activities have been increasing slowly but steadily .This is in line for skill development. Students and faculty members of the institute have done many AICTE-sponsored online courses and got certificates to improve their skills. Students also take part in different NPTEL courses. The progress in this area has been remarkable.</p>
4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):	<p>This institute is situated at the border of West Bengal and Jharkhand. A large number of students come to the Institute from neighboring states like Jharkhand, Bihar etc. While directing classes in English, request from the students to explain subject matters in their mother tongue frequently comes. Faculty members clarify subject matters in Hindi and Bengali languages outside the classroom to the students who</p>

	<p>feel any trouble due to medium of communication in English. The institute arranges numerous orientation events for all the students and gives stimulus to the students to participate in a various cultural and scientific programmes. Other than creating skilled engineers, the goal of the institute is to make good human being and good Citizens of India and the Institute has started this process at the beginning of the 21st century when the idea of NEP was imaginably not conceived of.</p>
<p>5. Focus on Outcome based education (OBE):</p>	<p>The Institute has got NBA accreditation in the year 2022 and already implemented OBE for various programmes. We have well defined Program Outcomes (PO), Program Educational outcomes (PEO) and Course Outcomes (CO) in our website and noticeable places in the departments. Students are assessed as per OBE attainment model. Several pragmatic education practices of Asansol Engineering College include practical, field Projects, Internships ,Industry Visits etc. The Institute conducts seminars, workshop, webinars, and conferences frequently and inspires students to take part and interact with top notched academician or resource person from corporate world. There are several students chapter in this institute – IEI, IEEE , CSI and ISHRAE student chapter. Students conduct several competitions, workshops and lecture series as part of activities of these chapters.</p>
<p>6. Distance education/online education:</p>	<p>Distance education has not been introduced for the engineering courses offered by the affiliating university and as such the institute has no such provision. Asansol Engineering College has implemented ICT-enabled tools in their teaching and learning processes, following the recommendations of the National Education Policy (NEP). The college's classrooms are equipped with Wi-Fi connectivity and ICT infrastructure, ensuring a technologically advanced learning environment. The entire campus is Wi-Fi enabled, providing seamless internet access to students and faculty. In the laboratories, the institute maintains a 1:1 student-to-computer ratio, with LAN connectivity for efficient usage. During the pandemic, the faculty swiftly transitioned to online classes, and both students and faculty adapted well to the shift from traditional face-to-face to online teaching and learning methods. Faculty members regularly upload various learning</p>

resources, including presentations, articles, assignments, pre-recorded videos, and relevant YouTube links, on the dedicated Google Classroom platform. The institute encourages students to enroll in courses from MOOC platforms, as recommended by the All India Council for Technical Education (AICTE). Moreover, the institute is registered as a SWAYAM-NPTEL Local Chapter, allowing students to participate in online courses, internships, and training programs offered by platforms such as NPTEL, Coursera, Udemy, Internshala, and others in recent years.

Institutional Initiatives for Electoral Literacy

1. Whether Electoral Literacy Club (ELC) has been set up in the College?	Yes
2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs are representative in character?	Yes
3. What innovative programmes and initiatives undertaken by the ELCs? These may include voluntary contribution by the students in electoral processes-participation in voter registration of students and communities where they come from, assisting district election administration in conduct of poll, voter awareness campaigns, promotion of ethical voting, enhancing participation of the under privileged sections of society especially transgender, commercial sex workers, disabled persons, senior citizens, etc.	The Electoral Literacy Clubs (ELC) at Asansol Engineering College have taken proactive measures to register unregistered students as potential voters for the future of our nation. Our endeavor is to instill a deep sense of democracy, nationalism, and shape the youth into active participants who can contribute to the progress of India.
4. Any socially relevant projects/initiatives taken by College in electoral related issues especially research projects, surveys, awareness drives, creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes, etc.	AA
5. Extent of students above 18 years who are yet to be enrolled as voters in the electoral roll and efforts by ELCs as well as efforts by the College to institutionalize mechanisms to register eligible students as voters.	AA

Extended Profile

1 Students

1.1

Number of students year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
2558	2584	2621	2601	2556

File Description	Document
Upload Supporting Document	View Document
Institutional data in prescribed format	View Document

2 Teachers

2.1

Number of teaching staff / full time teachers during the last five years (Without repeat count):

Response: 247

File Description	Document
Upload Supporting Document	View Document
Institutional data in prescribed format	View Document

2.2

Number of teaching staff / full time teachers year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
159	164	168	169	219

3 Institution

3.1

Expenditure excluding salary component year wise during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
1022.77	648.30	945.08	899.69	847.03

File Description	Document
Upload Supporting Document	View Document

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curricular Planning and Implementation

1.1.1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

Response:

Curriculum Planning

Asansol Engineering College (Estb:1998) is affiliated to Maulana Abul Kalam Azad University of Technology (formerly known as WBUT). The institute follows the curriculum as developed by MAKAUT in the light of AICTE, UGC, and NEP2020 principles. We contribute our suggestions through our representative in the Board of Studies of University. Our representative forwards the suggestions as per the outcome of the meeting held in Institutional Academic Committee based on constructive feedbacks collected from all stakeholders. We emphasize on interdisciplinary and multidisciplinary courses and directives of NEP2020 which is evident from total credit points for B. Tech courses being 160 as per the guidelines. Our aim is to contribute towards holistic development of students.

Effective Delivery of Curriculum

The institute ensures effective curriculum delivery through:

- 1. Preparation and adherence to Academic Calendar:-** A three-tier Academic teaching-learning planning process is followed for achieving a micro-level. University Academic Calendar is a broad schedule and based on the same, semester-wise Institutional Academic Calendar is prepared to incorporate all academic and extra-curricular activities to be conducted during the semester which is approved by Internal Quality Assurance Cell (IQAC) and Institute Academic Committee. For proper dissemination of plan, departments prepare their departmental Academic Calendar in line with Institutional Academic Calendar.
- 2. Effective course delivery (Teaching Learning Process):-** Courses are allocated to faculty through a democratic process with due weightage to their subject expertise and choice. Faculties prepare lecture plans aligned with Course Outcomes (COs), incorporating prescribed syllabus along with certain in-curricular gaps identified by faculties for proper attainment of COs. Course delivery is ensured using various instructional methods and pedagogical initiatives such as lectures, tutorials, laboratory and project work, etc. Course coverage is periodically assessed and any related issues/discrepancies /modifications are discussed in Departmental Academic Committee (DAC) meetings for effective curriculum delivery. Feedback of students is obtained semester-wise which is an integral and indispensable part of curriculum planning and implementation.
- 3. Continuous Internal Assessment and Corrective Measures:-** Examination reforms and timeline are set by MAKAUT and are followed accordingly by the Institute. Institute conducts Continuous Assessments (CA1, CA2, CA3, CA4) for theory subjects and for practical subjects (PCA 1 & PCA 2). Internal assessment schedule is mentioned in Institute Academic Calendar, aligned with the

University Calendar published before the commencement of each semester. Institute has a transparent evaluation and grievance redressal system related to internal evaluations. After each internal assessment, periodic meetings are conducted in department with faculty members to assess the level of understanding of students on topics covered. Special coaching is provided for slow learners identified through the above process.

4. Self-learning Initiatives: - Asansol Engineering College is recognized by NPTEL as a local chapter and has entered into an MOU with Coursera for offering one free-of-cost course per semester to students for self-learning. Students and faculties are encouraged to get certified in relevant NPTEL and Coursera courses. Further, the institute has created an online platform where students access video lectures prepared by faculty members of our institution for all courses offered as per current curriculum.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

1.2 Academic Flexibility

File Description	Document
1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)	
Response: 50	
List of students and the attendance sheet for the above mentioned programs	View Document
Institutional programme brochure/notice for Certificate/Value added programs with course modules and outcomes	View Document
Institutional data in the prescribed format	View Document
Evidence of course completion, like course completion certificate etc. Apart from the above:	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

Other Upload Files

1

[View Document](#)

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online

courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

Response: 99.28

1.2.2.1 Number of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
2549	2577	2597	2578	2526

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

1.3 Curriculum Enrichment

1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability in transacting the Curriculum

Response:

The institution realizes the importance of integrating and promoting cross-cutting issues related to Gender, Human Values Environment, and Sustainability in order to have an enriched curriculum for the students so that they may able to develop their social awareness and professional competencies.

The institution focuses towards a holistic development of its students the variety of subjects offered by the University are added to the curriculum along with the inclusion of relevant activities that help the student to be society ready.

Gender Sensitization

The institution makes the students aware on some gender-sensitive issues and encourages behaviour modification by raising awareness on gender equalization through different programs and seminars. The institute creates the right kind of gender-sensitive environment that leads to mutual respect irrespective of their gender. The Women Cell of the Institution also contributes in disseminating awareness regarding gender Equality. Wall magazines, poster campaigns, and Nukkad-Nataks are also arranged at periodic intervals to address these social issues of gender discrimination and its ill effects which creates a greater impact among the young minds of the budding technocrats.

Human Values and Professional Ethics

Human values convey personal beliefs and Professional Ethics is the accepted standard of behaviour by professionals. Students are taught through various case studies and real-life instances to inculcate the universal ethics and values in order to become responsible citizens of the world.

The various subjects offered by the University covering the aspects of Human Values and Professional Ethics with different paper codes for different departments are added to the curriculum of the students for their better knowledge on these facets. The institution also instils human values among the students through various programs organised by the NSS team.

Environmental and Sustainability

Environmental awareness and sustainability regarding resource utilization, effects of various pollution, and associated risks for humans and other organisms is addressed in the classes of Environment and Ecology. The needs of exploring environmental problems and the development of suitable remedies of various environmental problems are prime requirements for the engineers from various streams in the present curriculum. Students are encouraged to evaluate real-life environmental problem identification and also participated in its suitable remediation through several paper codes in current syllabuses. Several outdoor projects have also been organised by the institution related to environmental awareness and sustainability by the students under the guidance of the teachers. Tree plantations and the protection of trees have been incorporated into an annual program of the institution to emphasize the significance of environmental awareness among the students. The institution also boasts of holding a Nature Park to maintain the ecological balance.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

1.3.2 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)

Response: 94.72

1.3.2.1 Number of students undertaking project work/field work / internships

Response: 2423

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

1.4 Feedback System

1.4.1 Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website

Response: A. Feedback collected, analysed, action taken& communicated to the relevant bodies and feedback hosted on the institutional website

File Description	Document
Feedback analysis report submitted to appropriate bodies	View Document
At least 4 filled-in feedback form from different stake holders like Students, Teachers, Employers, Alumni etc.	View Document
Action taken report on the feedback analysis	View Document
Link of institution's website where comprehensive feedback, its analytics and action taken report are hosted	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Enrolment percentage

Response: 80.54

2.1.1.1 Number of seats filled year wise during last five years (Only first year admissions to be considered)

2021-22	2020-21	2019-20	2018-19	2017-18
652	613	639	602	619

2.1.1.2 Number of sanctioned seats year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
776	776	776	776	776

File Description

Document

Institutional data in the prescribed format

[View Document](#)

Final admission list as published by the HEI and endorsed by the competent authority

[View Document](#)

Document related to sanction of intake from affiliating University/ Government/statutory body for first year's students only.

[View Document](#)

Provide Links for any other relevant document to support the claim (if any)

[View Document](#)

2.1.2 Percentage of seats filled against reserved categories (SC, ST, OBC etc.) as per applicable reservation policy for the first year admission during the last five years

Response: 88.69

2.1.2.1 Number of actual students admitted from the reserved categories year wise during last five years (Exclusive of supernumerary seats)

2021-22	2020-21	2019-20	2018-19	2017-18
34	32	28	28	27

2.1.2.2 Number of seats earmarked for reserved category as per GOI/ State Govt rule year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
36	36	32	32	32

File Description	Document
Institutional data in the prescribed format	View Document
Final admission list indicating the category as published by the HEI and endorsed by the competent authority.	View Document
Copy of communication issued by state govt. or Central Government indicating the reserved categories(SC,ST,OBC,Divyangjan,etc.) to be considered as per the state rule (Translated copy in English to be provided as applicable)	View Document

2.2 Student Teacher Ratio**2.2.1 Student – Full time Teacher Ratio
(Data for the latest completed academic year)****Response:** 16.09**2.3 Teaching- Learning Process****2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences and teachers use ICT- enabled tools including online resources for effective teaching and learning process****Response:**

In this digital era Asansol Engineering College (AEC) offers a technology based learning platform to develop the knowledge and skill of the students and strengthen their moral principles in order to shape their careers and attitudes in proper path. All departments run a variety of initiatives to foster students' creative abilities, give them a platform to develop their problem-solving abilities, and promote active learning through hybrid mode.

Experiential Learning(learning through hands-on experiments): A practical approach combined with theoretical knowledge is required for quality learning in any field. At AEC we focus on experiential

learning through laboratories, workshops, projects, internship and industrial visits to expand learners' knowledge and develop competence in skills and behaviors.

Participative Learning(students are engaged in a common task where they are accountable to one another): - Apart from classroom teaching, several competitions and programs like PPT presentation, Project competitions, Group Discussions, Quiz, Tech Fest, Cultural Fest etc. are organized by different departments, clubs and societies of the Institute. In these events students participate in groups which promote teamwork among them. Students are also encouraged to participate in various intra college, state level and national level project competitions, design contests, and other technical and cultural events.

Problem solving Methods: - Students enhance their problem-solving ability through tutorial classes, software based laboratories, conduction of regular test on technical, reasoning and aptitude etc. Some of the problem-solving methods adopted by faculty members include open book examination, simulation, case study, prototype modeling and display, project-based learning etc. Apart from these curricular components, one value added course is offered on different technical topics to each student per semester to develop their critical thinking and skill.

Utilization of ICT enabled tools for effective Teaching-Learning process: -

At AEC the Online LMS like CANVAS, Blueowl etc. allow students to access a range of resources, including recorded video lectures and PPT presentations which serve as a repository. Also, the teachers use various other LMS platforms like Google Classroom, Zoom, Google meet etc. to conduct online classes, upload the course materials, technical presentations, learning materials, assignments and online quizzes etc.

The Institute has signed an agreement with COURSERA to allows the students and faculty members to access one value-added courses per-semester free of cost. They are also encouraged to utilize other online resources like NPTEL, National Digital Library of India and other e-content available at the library.

ICT Tools:

There are **956 Computers, 32 Printers, 3 Photocopier machines, 29 Scanners, 6 Smart boards and 68 Projectors** in the institute to facilitate ICT enabled teaching-learning process.

Use of ICT by Faculty Members

Faculty members are motivated to use power-point presentations in their teaching by using smartboards and projectors. Digitally equipped Seminar and Conference rooms are utilized for guest lectures, expert talks and various competitions regularly. Google forms are used for conducting online Quiz. Students counselling is done through Google meet, Zoom etc. Various available ICT tools are also used for conducting workshops and seminars on latest methods such as Programming languages, simulations etc.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

2.4 Teacher Profile and Quality

2.4.1 Percentage of full-time teachers against sanctioned posts during the last five years				
Response: 100				
2.4.1.1 Number of sanctioned posts year wise during the last five years				
2021-22	2020-21	2019-20	2018-19	2017-18
159	164	168	169	219
File Description	Document			
Sanction letters indicating number of posts sanctioned by the competent authority (including Management sanctioned posts)	View Document			
Provide Links for any other relevant document to support the claim (if any)	View Document			

2.4.2 Percentage of full time teachers with NET/SET/SLET/ Ph. D./D.Sc. / D.Litt./L.L.D. during the last five years (consider only highest degree for count)				
Response: 30.15				
2.4.2.1 Number of full time teachers with NET/SET/SLET/Ph. D./ D.Sc. / D.Litt./L.L.D year wise during the last five years				
2021-22	2020-21	2019-20	2018-19	2017-18
59	58	58	47	43

File Description	Document
List of faculties having Ph. D. / D.Sc. / D.Litt./ L.L.D along with particulars of degree awarding university, subject and the year of award per academic year.	View Document
Institution data in the prescribed format	View Document
Copies of Ph.D./D.Sc / D.Litt./ L.L.D awarded by UGC recognized universities	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.5 Evaluation Process and Reforms

2.5.1 Mechanism of internal/ external assessment is transparent and the grievance redressal system is time- bound and efficient

Response:

Being an affiliate Institute, AEC adheres guidelines laid down by the university for internal/ external assessment. Before commencement of each semester, university published tentative dates for internal/ external assessment and guidelines for examination. Further, the external evaluation is conducted by the university and institute play the role of only facilitator.

Based on the guidelines of the university, Institute has developed a robust, transparent and time bound mechanism for internal assessment.

Mechanism of internal/ external assessment

As per the guideline the course evaluation has two components namely, internal/continuous assessment and semester/terminal assessment with a weight of 30:70 (for theory) and 40:60 (for laboratories) on a scale of 100.

a) *The internal/continuous assessment includes*

1. Class test, Quiz and Assignment etc. (For Theory Courses)
2. Rubric for continuous evaluation (For Laboratory, Session and Project)
3. Attendance of the students

b) *The external evaluation consists of a written examination at the end of the semester.*

Till 2019, two class tests and two assignments were used continuous assessment as per the norms of the University. From 2020 onwards, as per University norms, internal assessment for theory papers is done through 4(four) Continuous Assessment (CA) based on class test, assignment, quiz etc. For laboratory, sessional and project related courses, the continuous assessment is done based rubrics developed by the

course coordination team. These evaluation rubrics are communicated to the students at the commencement of each semester by the respective faculty members.

Time- bound Internal Assessment

Based on the university's academic calendar, institute develops its own academic calendar for each semester. It specifies deadlines for completing syllabus coverage and administering Continuous Assessments (CAs) and publication of results for theory, sessional, and laboratory papers. The internal assessment process is communicated to students by the respective faculty at the commencement of new semester as well as during the first-year orientation program. Appropriate schedule and syllabus for internal assessment is communicated to students well in advance (minimum one week before the of commencement of examination).

Furthermore, any changes in schedules, patterns, or methods are immediately communicated to students via classroom briefings and the department notice board.

Mechanism to deal with examination-related grievances

In the case of grievance with evaluation, the following two aspects are performed at the Institute.

Internal Assessment:

Within one week of the internal exams, the class test answer scripts are evaluated and distributed for mark verification. The college has a policy of showing internal examination answer books to students in class after evaluation for self-evaluation. If there is any clarification needed, the student can approach the concerned faculty within three after display of marks. However, if a grievance cannot be addressed by the course faculty, the student has the option to take it up with the Head of the Department through his/ her Section Coordinator. Head of the Department may order, re-evaluation of the answers script of any other teacher in the presence of student concerned, course teacher and Program Coordinator.

External Assessment: As per University norms.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

2.6 Student Performance and Learning Outcomes

2.6.1 Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website

Response:

From academic year 2015-16, the Institute migrated to Outcome Based Education (OBE) to impart education through a student-centric approach, boost student employability, and pursue an outcome-oriented teaching learning process. For all UG and PG programmes, Programme Outcomes (POs), Programme Specific Outcomes (PSOs), Program Educational Objectives (PEOs), and Course Outcomes (COs) have been developed in line with NBA guidelines.

Institute has adopted twelve POs, prescribed by National Board of Accreditation (NBA), representing the graduate attributes (GAs) as per Washington Accord. All the departments of the Institute have formulated PSOs and PEOs focusing on specific outcomes/objectives which the graduates will acquire by the end or after some years of completion of the particular UG/PG programme.

COs for all the courses are formulated and are mapped with POs and PSOs by respective course coordination team of the Institute based on university guidelines.

The POs, PSOs, PEOs and COs are communicated the teachers and students using following medium:

Communication Medium	POs	PSOs	PEOs	COs
Website	Y	Y	Y	Y
Departmental Boucher	Y	Y	Y	Y
Induction Program of 1st Year Students	Y	Y	Y	Y
HoD's Office	Y	Y	Y	
Faculty Rooms	Y	Y	Y	
Laboratories	Y	Y	Y	Y
Class Rooms	Y	Y	Y	
Departmental Library	Y	Y	Y	
Lab Manuals				Y
Course Files	Y	Y	Y	Y

Apart from that, Institute makes several efforts to ensure that information is disseminated effectively to all the stakeholders. Some of the major initiatives includes: -

- POs, PSOs and PEOs along with their importance informed to the students at the commencement of the semester by the HoD / Coordinator.
- COs of each course are communicated to the students by respective teachers for the courses. Further, students are regularly update regarding accomplishment of COs during the course delivery.
- POs, PSOs and PEOs are communicated to the new staff members during their induction program after joining.

Sample PSO and CO statement

PSOs for UG Program (B. Tech in Electronics & Communication Engineering)

- **PSO-1:** A potential to comprehend the concepts of Electronics & Communication Engineering and to apply them to various areas like Signal processing, VLSI, Embedded systems, Communication Systems, Digital & Analog Devices, etc.
- **PSO-2:** A capacity to solve complex Electronics and Communication Engineering problems, using latest hardware and software tools, along with analytical skills to arrive economical and apt solutions.
- **PSO-3:** Insight of social and environmental perception along with moral responsibilities to have a successful career and to support devotion for real-world applications using optimal resources as an Entrepreneur in the field of Electronics and Communication Engineering.

Sample COs of EC-304: -After Successful completion of the course EC-304 students will be:

EC-304.1	Explain the different characteristics of operational amplifier	
EC-304.2	Identify the applications of operational amplifier in different electronics circuit.	
EC-304.3	Demonstrate the characteristics of different multivibrator and power amplifier circuit	
EC-304.4	Analyze different transistor amplifier and oscillator circuits for different applications.	
EC-304.5	Compare the different biasing configuration and stability factor of transistor circuit.	
EC-304.6	Explain the characteristics of the filter and classify different voltage regulator circuits.	

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

2.6.2 Attainment of POs and COs are evaluated. Explain with evidence in a maximum of 500 words

Response:

Course Outcome Assessment Process

The CO assessment tools used to measure the attainment levels may be in terms of student's performance in internal assessments such as tutorials, assignments, laboratory tests, project evaluation, project presentations, oral examinations, etc. and student's performance in University examination.

All the courses prescribed by the University for the Program under consideration may be divided into three categories viz. Theory Courses, Laboratory Courses and Project / Sessional Courses for the evaluation.

The overall percentage distribution of marks for direct assessment methods as per examination scheme is shown in Table 1.

Course Type	Assessment Type	Evaluation Through	Target level
Direct Assessment			
Theory	Internal	Class Test	60% Marks
		Assignment	60% Marks
	External	University Exam Score	60% Marks
Laboratory	Internal	Viva Vice	80% Marks
		Lab Report	80% Marks
	External	University Exam Score	80% Marks
Project/ Sessional	Internal	Rubrics	80% Marks
			80% Marks

Data Acquisition Process for CO Assessment

The assessment process for the courses are not just limited to measurement as indicated in the table above and may include some non-measurable parameters like value judgment. The data required for the assessment of attainment level of each CO is indicated Table 2. The data acquisition frequency and process is presented in Table 2.

Type of Assessment Tool	Assessment Tool	Data Collection Frequency
DIRECT	Class Test (CT)	Twice every semester Four times in a semester
	Assignment (AT)	Twice every semester Four times in a semester
	Viva-voce	Twice every semester
	Laboratory Report	Continuous
	University Examination	Semester wise
INDIRECT	Program Exit Survey	Once in a year

Record the attainment of Course Outcomes of all courses with respect to set attainment levels

The attainment level of each course outcome is measured through percentage students getting marks above target level (as indicated in Table 1) for each internal assessment tool as indicated in (as indicated in Table 2). The attainment level for Course outcome is adopted as in Table 3.

Attainment Level (AL)	Criteria
1	60% students scoring above target level
2	70% students scoring above target level

3	80% students scoring above target level
---	---

Target Level as indicated in Table 1

The overall attainment of COs evaluated through Internal Assessment and External is calculated as follows:

CO Attainment calculation (Theory):

- Weighted Average = $CT*0.6 + AT*0.4$

Attainment level for each CO: will be based as per Table 3

- Overall CO Attainment level for each CO (AL) = 30% of internal + 70% of external

[PO & PSO attainment = (Overall COs Attainment)* (Mapping value of PO and PSO for COs)]

CO Attainment calculation (Practical):

Similarly, for the laboratory courses, the overall attainment is calculated as follows:

- Overall attainment of COs (Practical) = $0.60* \text{Internal assessment} + 0.40* \text{External assessment}$

Overall POs and PSOs Attainment: 80% Direct Assessment + 20% Indirect Assessment

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

2.6.3 Pass percentage of Students during last five years (excluding backlog students)

Response: 100

2.6.3.1 Number of final year students who passed the university examination year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
683	680	691	658	627

2.6.3.2 Number of final year students who appeared for the university examination year-wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
683	680	691	658	627

File Description	Document
Institutional data in the prescribed format	View Document
Certified report from Controller Examination of the affiliating university indicating pass percentage of students of the final year (final semester) eligible for the degree programwise / year-wise.	View Document
Annual report of controller of Examinations(COE) highlighting the pass percentage of final year students	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process	
Response:	
File Description	Document
Upload database of all students on roll as per data template	View Document

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the last five years (INR in Lakhs)

Response: 58.51

3.1.1.1 Total Grants from Government and non-governmental agencies for research projects / endowments in the institution during the last five years (INR in Lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
5.35	5.65	0.52	30.61	16.38

File Description

Document

Upload supporting document

[View Document](#)

Institutional data in the prescribed format

[View Document](#)

3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the creation and transfer of knowledge/technology and the outcomes of the same are evident

Response:

Asansol Engineering College has formed an ecosystem for Research and Innovation by (i) appointing highly qualified faculty members (ii) captivating proposal for creation and propagation of knowledge and (iii) establishing high-tech infrastructure.

(a) Resource Development

Asansol Engineering College employs highly commendable, innovative, energetic young faculty members at the entry level. This is achieved through a rigorous selection process that involves careful evaluation of applications, assessment of teaching and research abilities through seminar presentations, and comprehensive interviews. The college's annual performance appraisal system serves as a motivating factor for faculty to enhance their research, teaching, and administrative skills and to get promote. Moreover, faculty members are encouraged to actively engage in various professional development programs, seminars, webinars, workshops, and conferences, both as participants and organizers.

(b) R&D activity

The institute has a well-defined R&D policy and active R&D cell. Faculty members are well motivated to supervise research scholar. The main objective is to encourage faculty and students to do innovative research and filing of patents and to organize webinars and seminars on Intellectual Property Rights. The number of patent filed during the last 5 years was 22 and financial grant of amount Rs.58.5 lakhs was received by the Institute from different government & non-government organization.

During the last five years faculty members have published more than 265 papers (indexed in SCI, Scopus, WoS, UGC care) , conference proceedings and book chapters.

(c) Infrastructure

The Institute is equipped with cutting-edge laboratories for conducting various R&D activities through different projects. Students receive funding for their innovative projects from government and non-government agencies. A project titled "Non-contact switching system for light and fans" received funding from the Government of Assam. Additionally, several innovative projects such as arsenic removal kit for drinking water, LPG gas accident alert and prevention, and resume builder using Flask framework were selected for funding through the Idea-O-Meter, a crowd funding platform.

(d) Institution's Innovation Council (IICs)

IICs is a faculty-experts-student council to promote Innovation and Entrepreneurship round the year. Under IIC various activities like seminar, webinar, workshop ,panel discussion, motivational session on start up are conducted throughout the year for entire 360 degree growth of students.

(e) Entrepreneurship Development (ED) Cell

The Institute has an ED cell which helps the students to drift startup activities by providing all types of technical assistance in the proper direction.

(f) Industry-Institute Partnership Cell

This Cell facilitates the following activities:

- Skill Development Programs are organized by industry professionals.
- A liaison between the Institute and industry is established.
- Summer training of students for industry exposure

(g) Student Branch/Chapter

The institute has different students branch/chapter such as IEI , CSI, ISHRAE and IEEE students' branch, IEEE MTT-S and AP-S chapter. Renowned scientist from NASA, USA and ISRO inaugurated IEEE student chapter on 15.09.2022 for the progress of students.

Some other initiatives include

Industry Visit, Field trip, Techno-fest to cultivate creativity and innovation, Project work for all students, Annual exhibitions of Models, Indian knowledge Systems (is in Implementation phase)

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

3.2.2 Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years

Response: 46

3.2.2.1 Total number of workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
13	12	7	7	7

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

3.3 Research Publications and Awards**3.3.1 Number of research papers published per teacher in the Journals notified on UGC care list during the last five years**

Response: 0.53

3.3.1.1 Number of research papers in the Journals notified on UGC CARE list year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
38	28	23	17	26

File Description	Document
Link to the uploaded papers, the first page/full paper(with author and affiliation details)on the institutional website	View Document
Link to re-directing to journal source-cite website in case of digital journals	View Document
Links to the papers published in journals listed in UGC CARE list or	View Document
Institutional data in the prescribed format	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

Response: 0.54

3.3.2.1 Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
33	29	37	16	18

File Description	Document
List of chapter/book along with the links redirecting to the source website	View Document
Institutional data in the prescribed format	View Document
Copy of the Cover page, content page and first page of the publication indicating ISBN number and year of publication for books/chapters	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.4 Extension Activities

3.4.1 Outcomes of Extension activities in the neighborhood community in terms of impact and sensitizing the students to social issues for their holistic development during the last five years.

Response:

Asansol Engineering College is enthusiastically and persistently arranging and taking part in different extension activities and outreach program to support the “Institute-Neighborhood community” to adhere students towards neighborhood requisites.

The principle of teaching is not only making ready the students to get knowledge but also build them good citizens and good human beings. The importance of compassionate with the under privileged are one of the significant elements to be inculcated through good educational environment.

Asansol Engineering College uplifts a long-term journey of social welfare awareness program. The inclination to work for the social needs is being valued through NSS activity and Mandatory Additional Requirements (MAR) points. Through MAR and NSS students get the perception towards the role of volunteers.

Different Committee organizers along with members implant this awareness activities through different programs like Blood donation camps, Hygiene and Environment Awareness, Green environment & tree plantation, Gender sensitization, Cloths & stationary donation camp, Campaign - Say no to crackers, Feed animal drive for stray cows, National Youth Day celebration, Road safety awareness campaign, No vehicle day, Women Empowerment activities etc. Students can develop their societal relationships and leadership quality through the positive impact of these program. It also helps in refining the buried qualities of students and creating awareness among students. Women empowerment program creates awareness and rights among girl students, leading to a gender equity. The Institute has given ample opportunity to update different activities of excellence through social media like Facebook, YouTube, LinkedIn, Twitter, Instagram. Blood donation camps in the College is normal characteristic (once in a year) whereby students and staff donate blood for the cause. Almost 150-200 units drawn blood is sent to Government hospital of West Bengal.

The NSS cell of Asansol Engineering College is continually nurturing students to increase realization about the communal matters like orphanage home sewa, old age home sewa by contributing them their necessary items, awareness program of Street Harassment. Programs on women empowerment builds consciousness among girl students of their condition and their rights. All these moulds the students as informed, balanced and responsible citizen.

The NSS volunteers lend a helping hand to the society in need and several community services like tree plantation, visit to various NGOs, distribution of masks and hand sanitizers during covid pandemic are the major steps taken by NSS wings of our college.

NSS unit of the Institute taken the following few extra initiatives like

- Vaccination drive
- Free eye check up camp
- Pulmonary test
- Voters awareness

- Dental checkup camp

The newly formed NCC unit of the college are responsible for organizing various extension activities such as save fuel save country programme, road safety awareness, Ekta daud for health etc.

It aims at budding qualities of leadership, nationalism, maintaining discipline, character building, and spirit of adventure and the ideal of self service.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

3.4.2 Awards and recognitions received for extension activities from government / government recognised bodies

Response:

Asansol engineering college has well-built and dynamic NSS unit to carry out a variety of extension and outreach activities for the panoramic societal connection of budding students. Overall development of the students is one of the key concerns of the Institute. The live out of addressing the social concern enthusiastically is being rooted from the very beginning through extended activities. The thoughts of helping neighborhood community is being sustained through extended activities for Mandatory Additional requirements (MAR) and the mandatory noncredit course of NSS. For socialistic development among the first-year students, the National Service Scheme (NSS), an initiative by the Ministry of Youth Affairs and Sports, Central Government of India, is treated as compulsory. Under this integrated approach first year students as volunteer stretch their hands for the societal needs. Several social works like “tree plantation”, NGO visits, masks and sanitizers distribution in a big volume during the nightmare of pandemic are some burning examples taken to support society under the scheme of NSS. The institute have received recognition from government/ government recognized bodies through different programs:

1. Blood Donation Camps – Institute received appreciation certificates several times from State Blood Transfusion Council, West Bengal
2. Swachh Bharat Abhiyan - Institute received appreciation certificates several times for E-Waste Recycling from HULLADEK, Hungry for Waste.
3. Green & Clean Campus - Institute received appreciation certificates several times for Green & Clean Campus from Asansol Municipal Corporation, Asansol.
4. Visiting Community of Intellectual disable members- NSS Unit of Asansol Engineering College visited Community and provided sports items for Intellectual disable members and received appreciation certificates from F.M.R. INDIA ASHA NIKETAN (fellowship with mentally retarded)
5. Vaccination Camp by Asansol Engineering College - 1st Dose Covishield and 2nd Dose Covishield
6. Asansol Engineering college participated several times on discussion forum on Ecological Sustainability in the Industrial region Asansol/Durgapur and received appreciation certificates from BCC&I, The Bengal Chamber.

For three sixty-degree holistic development of students, all these extension and outreach activities are planned with full potential. It is to be noted that taking part in the following ventures like “Swatch Bharat Abhiyan”, “Blood donation camp”, “tree plantation program” etc. students turn out to be more aware about the delicacy of our eco-system. Students energetically appoint themselves in promotion of water conservation programs and awareness programs like “Ban on Use of Plastic items” etc. The institute is a mentor of three schools under IIC - Asansol Kendriya Vidyalaya, Amlajorah High School, Jawahar Navodaya Vidyalaya under Atal Tinkering Lab and provides integrated support to students for the development of technological knowledge to build inventive prototypes for solving societal issues. Asansol Engineering College has got appreciation for its exceptional involvement for various extension activities and awareness program like Fighting Pandemic Covid-19 with Vaccination drive, Blood Donation camp, free Eye check up camp, free dental camp, Women Empowerment Program etc.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

3.4.3 Number of extension and outreach programs conducted by the institution through organized forums including NSS/NCC with involvement of community during the last five years.

Response: 47

3.4.3.1 Number of extension and outreach Programs conducted in collaboration with industry, community, and Non- Government Organizations through NSS/ NCC etc., year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
13	11	6	9	8

File Description	Document
Photographs and any other supporting document of relevance should have proper captions and dates.	View Document
Institutional data in the prescribed format	View Document
Detailed report for each extension and outreach program to be made available, with specific mention of number of students participated and the details of the collaborating agency	View Document

3.5 Collaboration

3.5.1 Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.

Response: 40

File Description	Document
Summary of the functional MoUs/linkage/collaboration indicating start date, end date, nature of collaboration etc.	View Document
List of year wise activities and exchange should be provided	View Document
List and Copies of documents indicating the functional MoUs/linkage/collaborations activity-wise and year-wise	View Document
Institutional data in the prescribed format	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The Institution has adequate infrastructure and other facilities for,

- teaching – learning, viz., classrooms, laboratories, computing equipment etc
- ICT – enabled facilities such as smart class, LMS etc.

Facilities for Cultural and sports activities, yoga centre, games (indoor and outdoor), Gymnasium, auditorium etc (Describe the adequacy of facilities in maximum of 500 words.)

Response:

Infrastructure:

This institute has been entrusted with providing world-class infrastructure to the student fraternity, enabling them to envisage and equipped adequately. The Institute has an extensive campus spread of 16.76 acres with modern buildings, well equipped and spacious library, technology-supported class-rooms, state of art laboratories, training and placement office, and seminar halls etc.

Class Rooms with ICT Facilities: All Lecture Classes (64)

The institute has 64 class rooms are equipped with LCD projectors and necessary teaching aids for effective teaching and learning process.

Laboratories: 67

All laboratories are equipped with state of art facilities with periodic maintenance including calibration and servicing, updating antivirus and updating software. Each laboratory has following displayed boards:

1. Vision and Mission board
2. Experimental board
3. Do's and Don'ts board
4. Safety measure board
5. Course Outcome

Smart Rooms: 06

The smart rooms are equipped with smart interactive board facility, audio and video facilities for effective teaching learning process.

Drawing Halls: 02

Drawing halls are equipped with drawing board, drawing table, with good ventilation and ambience.

Workshops: 02

The institute has modern mechanical workshops equipped with state of the art facilities to enhancing the knowledge of the students.

Library:

The central library having web-based library management system for the students named LibMan.

Seminar Halls: 03

Seminar halls are equipped with projector, Wi-Fi, Audio and Video facilities with 120 seating capacity.

Conference Hall: 01

Conference hall is equipped with projector, Wi-Fi, Audio and Video facilities with 100 seating capacity.

Hostel: 05

The institute has 03 boy's hostel of 297 capacity and 02 girl's hostel of 200 capacity with modern facilities such as each room having internet facility with 500 Mbps LAN connection, each floor facilitated with purified water cooler, indoor game in each hostel, students common room, reading room etc. One hostel exclusively provided for the first year students.

CCTV cameras:

Campuses are under the surveillance of 200 CCTV cameras located at different locations of the Institute.

Sports and Games:

The sports committee responsible to ensure to provide the necessary infrastructure that helps the students to take up good habit of playing games and sports but also to develop the spirit of sportsmanship and leadership.

Different sports facilities are:

1. **Volleyball court: 01**
2. **Football/Cricket Ground: 01**
3. **Badminton Court: 02**
4. **Basketball Court: 01**
5. **Table Tennis Board: 05**
6. **Indoor Gymnasium hall: 01**

Cultural:

The cultural unit of college organizes several programmes across the year where students can freely participate and harness their talents.

College organized Cultural Fest called "**LEGANZZA**" and the Technical Fest called "**INFOQUEST**".

The institute having cultural facilities for organizing the different events across the year as:

1. **Amphitheatre: 01**
2. **Cultural Room: 01**

The Institute has different musical instruments are used during cultural activities as follows:

1. **Keyboard Synthesizer: 01**
2. **Guitar: 02**
3. **Violin: 01**
4. **Harmonium: 01**
5. **Tabla: 01**

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

4.1.2 Percentage of expenditure for infrastructure development and augmentation excluding salary during the last five years

Response: 28.65

4.1.2.1 Expenditure for infrastructure development and augmentation, excluding salary year wise during last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
275.76	217.27	252.67	257.12	246.99

File Description	Document
Institutional data in the prescribed format	View Document
Audited income and expenditure statement of the institution to be signed by CA for and counter signed by the competent authority (relevant expenditure claimed for infrastructure augmentation should be clearly highlighted)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

4.2 Library as a Learning Resource

4.2.1 Library is automated with digital facilities using Integrated Library Management System (ILMS), adequate subscriptions to e-resources and journals are made. The library is optimally used by the faculty and students

Response:

The institute central library from 2016 onwards introduced web-based library management system-LibMan, to improve and streamline the library operations and management.

Six modules of LibMan Software support the workflow of the automated library system.

1. System Administration
2. Cataloguing
3. Circulation Management
4. Serial Control
5. Report Generation
6. OPAC

Library Resources and Facilities

The library offers a comprehensive repository of reference materials and facilities for fulfilling the student's needs.

1. Printed Books (Title: 7211, Volume: 66128)
2. E-Books (Title: 1150, Volume: 1150)
3. E-Journals (IEEE: 205)
4. Hard copy Journals (Title: 24)
5. Magazines (10 Nos.)
6. News Papers (5 Nos.)
7. Semester Exam Question Papers
8. Book Bank
9. Student Project Reports
10. Faculty and Student Publications
11. OPAC and Web OPAC
12. Internet facility through Wi-Fi and LAN
13. Reference and Referral Services
14. NPTEL Video Lectures (50 courses)

Area of the Library

Total carpet area of library is 1207 square meter.

Central Library is equipped with 15 nos. of computers and 10 computers are used for OPAC.

Lending facility in library

Library provides Book Bank, Monthly Issue & Daily Issue services for all the students.

Sl. No.	Type of Issued Books	No. of Books	Fine
1.	Book Bank	The book bank facility is provided as per the number of subjects defined in the respective curriculum. 3 to 5 nos. of books are issued to the students every semester for the entire semester.	No Fine
2.	Library Books	3 nos.	Issued for 30 days. After 30 days per book Re.1.00 /day
3.	Daily Issue	1 no.	Issued for one day. After that per book Re. 1.00/day

e-Resources facility in Library

Students can access the following e-resources.

- 1.e-journals (IEEE)
- 2.e-books (Springer, Willey)
- 3.Databases (J-Gate)
- 4.NDLI
- 5.Sodhganga

Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR)

Financial Year	2017-18	2018-19	2019-20	2020-21	2021-22
	(INR)	(INR)	(INR)	(INR)	(INR)
Books	1,91,697.00	1,54,286.00	1,95,698.00		1,31,000.00
E-Books	5,16,211.00	5,37,359.00	5,51,019.00	5,68,228.00	5,92,000.00
E-Journals	4,65,234.00	5,07,210.00	5,22,780.00	5,30,706.00	5,74,000.00
Database	60,265.00	60,852.00	61,160.00	61,160.00	62,400.00
Hardcopy Journals and Periodicals	53,388.00	71,160.00	26,160.00	14,900.00	86,400.00
TOTAL	12,86,795.00	13,30,867.00	13,56,817.00	11,74,994.00	14,40,000.00

Average Expenditure: INR. 13.19 Lakhs

Per day usage of library by teachers and students

Number of teachers and students using library per day over last year is around 900

Percentage per day usage of library by teacher – 76.71

Percentage per day usage of library by students – 29.58

Mobile library service ‘ **Library on Wheels** ’ during pandemic: An unique initiative to provide required books to the students at their doorsteps.

The institute bus had been decorated as mobile library. Different counters were there for different branches. Windows of the bus were designed as circulation counter. Library staff served the purpose as they had done in the library. Students were informed through Whatsapp, Institute Website and also through concerned mentors. They were also asked to maintain covid protocol strictly. Their detail requirements had been collected earlier and books were arranged as per their requirements. This unique initiative was well appreciated by all.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection *Describe IT facilities including Wi-Fi with date and nature of updation, available internet bandwidth within a maximum of 500 words*

Response:

The institute has a precise IT policy that relates to network security and user services. The Infrastructure of the college is customized regularly to give an advanced IT requirement that include Smart classroom /Wi-Fi /Internet/ Security /Storage.

- **Wireless Network and LAN (Present status 500 Mbps):** All computers in the institute have internet facility connected through Wi-Fi and LAN. In order to fulfil the basic usages and requirements of IT facilities, the institute has upgraded its bandwidth frequently in the following way:

Year	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Speed	300 Mbps	300 Mbps	400 Mbps	400 Mbps	500 Mbps

Currently the institute has 70 wireless access points to provide internet facilities with 500 Mbps speed.

- **No of Computers:** All the working computers are connected with Wi-Fi and LAN and are available in different sections of the institutions. The College Computational Facilities include SUN Ultra SPARC, Apple MAC, IBM, & HCL Servers. By following way the institute has reached to 960 number of computers in the present academic year:

Sock before 2017-2018	No. of Computers purchased in the year					Present Stock (2022-2023) Total: 960
	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	
584	40	100	85	90	60	

Network and Security: The institute is secured by a **Sophos XG** Firewall connected with all the computers that acts as the central gateway to its hierarchical layered and structured network managed by Core and distribution switches. Currently the **Sophos XG** firewall has been upgraded to the latest version with much advanced features and security enhancements.

- **Surveillance and Communication:** The entire campus of the institute is protected by over 200 CCTV cameras located at different locations. This provides 24x7 surveillance with 30 days backup facility.
- **Server:** The institute has a Server Room. The entire IT infrastructure is being monitored through this Server Room. There are 16 Servers in the college.
- **System Software:** Different operating system platforms are provided like MS Windows, Linux, SCO unix, Novel Netware, Apple MAC, and SUN Solaris.
- **Application Software:** There is more than 40 application software available which cater to the need of all the disciplines. Some of the application software are: Oracle 10g, Visual Basic, Adobe

Photoshop 6.0, Adobe Live Motion, Adobe Illustrator 9.0, Adobe Golive 5.0, Coral Draw 10, Fireworks 4.0, Dream Weaver 4, Freehand 9, Macromedia Director 8.5, Macromedia Web Design Studio, Macromedia Flash 5, Libsys, Cyberoam 7.1, Citrix Metaframe, Windows Terminal Server, MS Office 2007, Visual Studio.net Professional, IBM Rational Rose, VSDL AP SW, LINDO, MATHEMATICA, Matlab, Norton 360 and Multisim V 12.0 (10 User).

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

4.3.2 Student – Computer ratio (Data for the latest completed academic year)

Response: 2.66

4.3.2.1 Number of computers available for students usage during the latest completed academic year:

Response: 960

File Description	Document
Purchased Bills/Copies highlighting the number of computers purchased	View Document
Extracts stock register/ highlighting the computers issued to respective departments for student's usage.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, during the last five years (INR in Lakhs)

Response: 71.35

4.4.1.1 Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year wise during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
747.01	431.03	692.41	642.57	600.04

File Description	Document
Institutional data in the prescribed format	View Document
Audited income and expenditure statement of the institution to be signed by CA for and counter signed by the competent authority (relevant expenditure claimed for maintenance of infrastructure should be clearly highlighted)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Percentage of students benefited by scholarships and freeships provided by the institution, government and non-government bodies, industries, individuals, philanthropists during the last five years

Response: 51.49

5.1.1.1 Number of students benefited by scholarships and freeships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
2297	1259	1255	1048	794

File Description	Document
Year-wise list of beneficiary students in each scheme duly signed by the competent authority.	View Document
Upload Sanction letter of scholarship and free ships (along with English translated version if it is in regional language).	View Document
Upload policy document of the HEI for award of scholarship and freeships.	View Document
Institutional data in the prescribed format	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

5.1.2 Following capacity development and skills enhancement activities are organised for improving students' capability

1. Soft skills
2. Language and communication skills
3. Life skills (Yoga, physical fitness, health and hygiene)
4. ICT/computing skills

Response: A. All of the above

File Description	Document
Report with photographs on Programmes /activities conducted to enhance soft skills, Language and communication skills, and Life skills (Yoga, physical fitness, health and hygiene, self-employment and entrepreneurial skills)	View Document
Report with photographs on ICT/computing skills enhancement programs	View Document
Institutional data in the prescribed format	View Document

5.1.3 Percentage of students benefitted by guidance for competitive examinations and career counseling offered by the Institution during the last five years

Response: 47.59

5.1.3.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
1443	1211	1107	1208	1179

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.1.4 *The institution adopts the following for redressal of student grievances including sexual harassment and ragging cases*

1. Implementation of guidelines of statutory/regulatory bodies
2. Organisation wide awareness and undertakings on policies with zero tolerance
3. Mechanisms for submission of online/offline students' grievances
4. Timely redressal of the grievances through appropriate committees

Response: A. All of the above

File Description	Document
Proof w.r.t Organisation wide awareness and undertakings on policies with zero tolerance	View Document
Proof related to Mechanisms for submission of online/offline students' grievances	View Document
Proof for Implementation of guidelines of statutory/regulatory bodies	View Document
Details of statutory/regulatory Committees (to be notified in institutional website also)	View Document
Annual report of the committee motioning the activities and number of grievances redressed to prove timely redressal of the grievances	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

5.2 Student Progression

5.2.1 Percentage of placement of outgoing students and students progressing to higher education during the last five years

Response: 70.68

5.2.1.1 Number of outgoing students placed and / or progressed to higher education year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
506	486	463	473	432

5.2.1.2 Number of outgoing students year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
683	680	691	658	627

File Description	Document
Number and List of students placed along with placement details such as name of the company, compensation, etc and links to Placement order(the above list should be available on institutional website)	View Document
List of students progressing for Higher Education, with details of program and institution that they are/have enrolled along with links to proof of continuation in higher education.(the above list should be available on institutional website)	View Document
Institutional data in the prescribed format	View Document

5.2.2 Percentage of students qualifying in state/national/ international level examinations during the last five years

Response: 7.56

5.2.2.1 Number of students qualifying in state/ national/ international level examinations year wise during last five years (eg: IIT/JAM/NET/SLET/GATE/GMAT/GPAT/CLAT/CAT/ GRE/TOEFL/ IELTS/Civil Services/State government examinations etc.)

2021-22	2020-21	2019-20	2018-19	2017-18
30	13	13	11	7

File Description	Document
List of students qualified year wise under each category and links to Qualifying Certificates of the students taking the examination	View Document
Institutional data in the prescribed format	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

5.3 Student Participation and Activities

5.3.1 Number of awards/medals for outstanding performance in sports/ cultural activities at University / state/ national / international level (award for a team event should be counted as one) during the last five years

Response: 37

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
10	09	05	04	09

File Description	Document
Upload supporting document	View Document
list and links to e-copies of award letters and certificates	View Document
Institutional data in the prescribed format	View Document

5.3.2 Average number of sports and cultural programs in which students of the Institution participated during last five years (organised by the institution/other institutions)

Response: 21.4

5.3.2.1 Number of sports and cultural programs in which students of the Institution participated year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
26	18	22	21	20

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

5.4 Alumni Engagement

5.4.1 There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

Response:

Asansol Engineering College has a strong Alumni Association (AECAA) established in the year 2014 and subsequently got registered under the West Bengal Societies Registration Act, 1961. Registration

Number: No. S0017109 of 2020-2021 on 12th February, 2021. AECAA is a platform through which the alumni get in touch with their alma mater and with their classmates. Alumni association helps student and faculty members to reconnect, reminisce, and revisit the rich memories, strengthen the bond, and share the rich experiences gained over the years. AECAA encourages vibrant studentalumni interactions in terms of lifelong learning. The students get to know the current trends and get insights about company-centric needs.

Objectives of AECAA:

- To provide an interface through which the alumni of the institute can keep in touch with the institute, faculty, staff and students of the institute and among themselves.
- To enable the alumni to take part in the institute's activities that will contribute to the improvement of the institute.
- To promote exchange of skills and experience.
- To conduct seminars, workshops and guest lectures.
- To promote community service and cultural activities.
- To help the alumni by giving advice to them on various technical problems that they might face at their place of work.
- To engage and stimulate the AEC Alumni network. It desires to work with alumni members towards understanding and fulfilling the interests of alumni and reinforcing the network.
- To facilitates academic and professional development, support and guidance to the students.

The Alumni members contribute to the development of the Institution in the following ways: -

Financial Support Services: Initially alumni members willingly contributed financially to the Institute. Then on, the financial contribution of Alumni members is routed through Alumni Association to the Institute for the developmemnt of the Institute and for the upcoming alumni.

Other Support Services:

Academic contribution:

The Alumni Association of AEC organizes invited talks, panel discussions, workshops and training programs. These technical events facilitate the students to experience the real-time work of the industry, and the students get beyond curriculum knowledge which helps them to prepare for placement. The alumni are invited in different student mentoring programs to motivate the students.

Placement contribution:

Some of the Alumni have started different start-ups and often hire AEC students as interns and then as employees. They also encourage and guide the students on self-employment to become entrepreneurs.

Extra-curricular activities:

The Institute organizes an Alumni Meet every year. The alumni network is helpful for the students and staff of the institute like academic, placement, mentoring and extra-curricular activities. The Alumni are invited as judge and evaluators for different techno-cultural events organized at Institute level. The information about the Alumni Association is available in the Institute website. The Alumni connects through the Institute official social media like Facebook, Instagram, Youtube, Twitter, and LinkedIn.

The links are as follows:

Alumni Portal: <http://45.249.70.99/aecalumni/>

Facebook: https://www.facebook.com/AEC1998/?modal=admin_todo_tour

Instagram: https://www.instagram.com/asansol_engineering_college/

YouTube: <https://youtube.com/channel/UCUcGoGnfkPxLhyut2I3Jmhw>

Twitter: <https://twitter.com/AsansolCollege>

LinkedIn: [linkedin.com/in/asansol-engineering-college-44799a206](https://www.linkedin.com/in/asansol-engineering-college-44799a206)

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 *The institutional governance and leadership are in accordance with the vision and mission of the Institution and it is visible in various institutional practices such as NEP implementation, sustained institutional growth, decentralization, participation in the institutional governance and in their short term and long term Institutional Perspective Plan.*

Response:

Asansol Engineering College exhibits effective leadership through its governance as per defined organogram, which considers the perspectives of various stakeholders. The institute's vision is to be a center of excellence in technical education, offering high-quality teaching, research opportunities and advanced learning environments for societal benefit.

To achieve its goals, the institution focuses on continuous improvement of the teaching-learning process, empowering students and teachers through skill development, fostering industry interactions, promoting research and innovation, and supporting holistic development through co-curricular activities.

The institution organizes seminars and conferences to keep stakeholders updated on research trends and encourages interaction with renowned researchers. Entrepreneurship development and industry-institute interaction are emphasized through MoUs.

Faculty members actively mentor and engage in diverse activities. Decentralization and participative management ensure effective leadership, with all employees and stakeholders contributing to decision-making processes. Transparent communication is facilitated through official emails, connecting everyone within the institute.

Statutory and non-statutory committees, following AICTE and UGC guidelines, ensure rational decisions and necessary actions. Academic, administrative, and financial affairs are discussed, approved, and communicated for a well-connected institute.

Statutory committees

- Board of Governors (BOG)
- Internal Quality Assurance Cell (IQAC)
- Academic Committee (AC)
- Finance Committee
- Internal Complaint Committee (ICC)
- Anti-Ragging Committee (ARC)
- Grievance Redressal Committee (GRC)
- SC/ST Committee

Non-statutory committees

- Industry Institute Partnership Cell (IIPC)
- Admission Committee

- Women's Cell
- R&D Committee.
- & other committees as per organogram

Administrative decentralization -

BOG holds responsibility for the overall management and control of the institute, exercising its powers.

AC supervises academic work, providing direction on instructional methods, research, and academic standards.

IQAC improves standards, enhances performance, and implements the institute's strategic plan.

GRC addresses student and staff grievances promptly.

ICC handles matters related to prevention and prohibition of sexual harassment, ensuring a safe environment.

IIC conducts innovation and entrepreneurship activities as prescribed by the Central MIC.

IIPC identifies future investors and collaborators, facilitating academic exchanges.

R&D Committee coordinates project proposals and maintains records of research activities and publications.

The Women's Cell promotes awareness of schemes for female students and deals with women-related issues.

The Sports Committee and Cultural Committee organize annual sports, games, and cultural programs.

The Student Life Centre hosts quiz competitions, seminars, and events related to science and technology.

The Training and Placement (T&P) Cell coordinates campus placement procedures.

The Establishment and Maintenance Committee ensures regular maintenance of the institute's buildings and equipment.

Academic decentralization is evident through the DAC, which addresses various academic matters, including research, courses, faculty workload, and the academic calendar. Major decisions are made by the AC and approved by the BOG, promoting a decentralized approach to academic affairs.

The FC of AEC handles budget estimation from internal and external sources. The Head of Department prepares a draft budget based on departmental requirements, which is discussed at the DAC meeting. The final budget is reviewed by the FC, submitted to the BOG, and upon approval, funds are allocated through the Principal. If the budget is not sanctioned by the BOG, it reverts to the DAC through the FC.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

6.2 Strategy Development and Deployment

6.2.1 *The institutional perspective plan is effectively deployed and functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment, service rules, and procedures, etc*

Response:

Asansol Engineering College (AEC) has well defined organizational hierarchy and structure which are clear and consistent to give support in decision making processes. There is involvement of stakeholders in various Committees, to sustain institutional capacity and to enhance educational effectiveness.

The main authorities of the institute are the **Board of Governors (BOG), Academic Committee (AC) and Finance Committee (FC)** which have different nominees from academia and industries of national repute.

The **BOG** is the principal policy making body in this institute which meets at least four times a year and takes decisions to be implemented by the head of the institute (**HOI**).

In administration, the **HOI** is assisted by a well-defined administrative structure including the office of the Registrar and other non-teaching officials. The chief implementation officer is the Registrar who is assisted by Finance Officer, administrative staff members and other functionaries in administration.

In academic matters, the head of the institute is assisted by HODs and course coordinators. The **AC** takes any final decision regarding any academics related matter. The **HOI** presides over the **AC**, which is comprised of eminent academicians and industry representatives. A well-defined organogram & KRA ensures the flow and accomplishment of jobs conferred to committee, body or an individual.

To plan for new programs, curriculum, course work and other important matters related to academics, HODs make recommendations to the **AC** through submitted proposals which have already been approved by the respective Departmental Academic Committees (DAC).

External members contribute to committees, promoting transparency & fairness in the institute. Additionally, student & faculty committees/clubs/bodies are established for decentralized management, enhancing functioning & facilitating effective teaching learning process.

Various committees have been constituted at the institute level involving faculty and students for smooth functioning of the institution, such as

- IQAC
- Grievance Redressal cell

- Internal Complaint Committee
- Examination Committee
- Library Committee
- R&D Committee
- Student Life Centre
- Admission Committee
- Anti-Ragging Cell
- Purchase Committee
- Training & Placement Committee

Apart from above, AEC has well defined

- Promotion Policies
- Service Rules
- Welfare Schemes
- Grievance Redressal Mechanisms
- R&D Policy
- Green Campus Policy
- E-Governance Policy
- Seed Money Policy
- Institutional Code of Conduct

The responsibilities and roles of all the teaching and non-teaching staffs are clearly mentioned in the Service Rules and it is updated from time to time.

Appraisal system is based on performance along with this AEC have a transparent promotion policy and scheme Career Advancement Scheme (CAS) and all its employees are well aware of it. The transparent promotional policies are well known to all the staff members. This Appraisal System is totally based on performance.

Grievance redressal mechanisms sustain the dignity of the institute by ensuring strife free atmosphere. It takes necessary measures for the settlement of grievances and to maintain harmonious educational system.

To ensure all development in every area of concern, the IQAC prepares road map for Five Years, referred as **the strategic planning**, which emphasizes on

- Research & Development
- Teaching and Learning
- Human Resource Management
- Infrastructure Industry Academia Collaboration
- Accreditation & Ranking of the institution

File Description	Document
Upload Additional information	View Document
Institutional perspective Plan and deployment documents on the website	View Document
Provide Link for Additional information	View Document

6.2.2 Institution implements e-governance in its operations

1. Administration
2. Finance and Accounts
3. Student Admission and Support
4. Examination

Response: A. All of the above

File Description	Document
Screen shots of user interfaces of each module reflecting the name of the HEI	View Document
Institutional expenditure statements for the budget heads of e-governance implementation ERP Document	View Document
Annual e-governance report approved by the Governing Council/ Board of Management/ Syndicate Policy document on e-governance	View Document

6.3 Faculty Empowerment Strategies

6.3.1 The institution has performance appraisal system, effective welfare measures for teaching and non-teaching staff and avenues for career development/progression

Response:

The institute believes that performance appraisal system is vital for the upliftment of its employees and it also brings out the best possible approach for self up gradation. An employee is assessed on the basis of several Academic Performance Indicators which are as follows-

- Academic Performance
- Administrative Responsibilities
- Research & Development
- Student Feedback
- Class Analysis

It is mandatory for an employee to meet the performance criteria as mentioned in the appraisal format to

get the benefits associated with it and the appraisal is done annually for every year. The review process of self appraisal report follows a two tier structure-

- Head of the Department
- Principal

The feedback regarding the self appraisal report is intimated to individual staff for improvement.

The performance appraisal of non teaching staff mainly focuses on three different criteria i.e., punctuality, sincerity, dedication in rendering their service which is assigned to them from time to time and also the different training programs which they attend to add benefits to the organization.

The different welfare measure that the organization has undertaken for the benefit of its staff and students are enlisted below-

1. General Welfare schemes for all staff of the institute:

- **Employee's Provident Fund (EPF):** The institute provides EPF facility to all its employees.
- **Interest free loan**
- Salary advance
- **Gratuity:** All employees are eligible for Gratuity after completion of continuous service of minimum 5 years and is governed by the Gratuity Act in force.
- **Leaves:** The institute provides the following leave structure for its employees as per institute rule.

1. Casual Leave(CL)=12 days per year
2. Earned leave(EL)= for vacational staff-30days per year

For non vacational staff = 20days per year

1. Medical Leave(ML)= 10days per year
2. Maternity Leave= 90days
3. Paternity Leave
4. Special Leave= once in a week(staff pursuing higher studies)

- **ESIC Scheme:** The institute provides ESIC (0.75% of gross) as per Government rule.
- **Medical Insurance:** The institute offer group medical insurance (United India Insurance) to its employees which has different slabs.

- In Campus Medical Assistance
- Transport Facility
- Staff Canteen
- ATM facility
- Gym
- Employee gets fees concession for their ward
- Staff quarters
- **Faculty members who upgrade their research work through quality publications during the**

academic year are honored through research incentive scheme every year.

- **Awards of excellence for teaching, research and extension is given to the deserving members every year.**
- Encouragement to aided faculty for FDP/UGC Research Fellowships.
- Freedom to attend/organize national/international workshops/conferences.
- Leave to attend Summer School Programmes/workshops/Seminars/Conferences in national and International Universities.
- Seed money for research.
- Financial assistance to attend conferences/workshops/seminars(Maximum Rs. Rs.12000/ for National Conference, Rs. 25000/ for International Conference)
- Paid leave for attending an academic programme abroad in a year/for attending one academic programme in a semester.
- One training programme/seminar/workshop not exceeding Rs 5000.
- Day-care facility for staff children
- ***Dearness Allowance (DA) and House Rent Allowance (HRA):*** The institute provides Dearness Allowance (120%) and House Rent Allowance (15%, maximum Rs. 6000) to its employees as per the Institute norms.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

6.3.2 Percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

Response: 84.87

6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
146	141	141	149	169

File Description	Document
Policy document on providing financial support to teachers	View Document
Institutional data in the prescribed format	View Document
Copy of letter/s indicating financial assistance to teachers and list of teachers receiving financial support year-wise under each head.	View Document
Audited statement of account highlighting the financial support to teachers to attend conferences / workshop s and towards membership fee for professional bodies	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

6.3.3 Percentage of teaching and non-teaching staff participating in Faculty development Programmes (FDP), Management Development Programmes (MDPs) professional development /administrative training programs during the last five years

Response: 79.24

6.3.3.1 Total number of teaching and non-teaching staff participating in Faculty development Programmes (FDP), Management Development Programmes (MDPs) professional development /administrative training programs during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
195	192	190	184	220

6.3.3.2 Number of non-teaching staff year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
70	69	71	74	75

File Description	Document
Refresher course/Faculty Orientation or other programmes as per UGC/AICTE stipulated periods, as participated by teachers year-wise.	View Document
Institutional data in the prescribed format	View Document
Copy of the certificates of the program attended by teachers.	View Document
Annual reports highlighting the programmes undertaken by the teachers	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution has strategies for mobilization and optimal utilization of resources and funds from various sources (government/ nongovernment organizations) and it conducts financial audits regularly (internal and external)

Response:

Procedure and policy adopted for resource mobilization

The institute being a self-financed organization always aims at utilization of funds in the proper resources for students and faculty members in context of the mission and vision of the college. The institute has the finance committee is in place to address all the affairs related to monetary policy of the institution under the supervision of BoG. The relation of finance committee with other departments of the college is given in the following manner-

Principal seeks budget from the departments and various support units through notice. Departments prepare budget by DSC and submit it to finance committee.

Principal, being the chairman of the finance committee, sends the collated budget to BOG for further approval. After meeting on stipulated date BOG approves (if not, collated budget is send

Back to finance committee for further verification) the budget and the same is implemented by the departments and supporting units through Principal. The process is explained explicitly through a proper diagram.

The functions of the finance committee are as under-

Functions:

- Budget preparation & Finance Planning
- Budget Allocation
- Recommend the Budget to BOG for approval.
- Re-appropriation of funds of different Heads of the Budget with approval of the BoG.

- Budget estimates relating to the grant received / receivable from the UGC and income from fees and other sources collected for smooth operation of the college.
- Advise the BoG on any matter involving finance.

Utilization of resources

The main internal source of fund is Tuition Fees from students. Based on Honourable Supreme Court guidelines, the Fee Fixation Committee of Government of West Bengal periodically fixed the Tuition Fee.

The other internal resources are Contribution from Trust for Infrastructural Development, Hostel Fees and interest on Savings Account.

In addition, external source of funds depends on research project grants, sponsorships, training and consultancy and loan from bank.

The institute should utilize the resources keeping in mind the all-round development of the institute and the probable benefits of the stakeholders. The areas which are directly involved in the above process are as follows:

- (i) Procurement of new laboratory equipments
- (ii) Upgradation of old equipments
- (iii) Infrastructure development and augmentation
- (iv) New laboratory setup
- (v) Salary of staff
- (vi) Purchase of library books, magazine, journals, subscriptions of e-journals and e-books.
- (vii) Purchase of consumables for laboratory use
- (viii) Maintenance expenses
- (ix) Seminars and workshops organization for students and staffs.
- (x) Maintenance for hostel facilities
- (xi) Recurring expenditure like electricity, internet, registration and affiliation, security and other running expenses.
- (xii) Stipend given to the students of this institute to pursue higher studies
- (xiii) Scholarships for financially weaker students

(xiv) Scholarships given to the students as per their academic brilliance

(xv) For student training and project

(xvi) E-Governance expenses, which include library operations, examination administration, and store and account operations (through ERP)

(xvii) To facilitate research activity, seed money is provided to the faculty members.

(xviii) Guest speakers honorarium

(xviii) For cultural activities, sports and other activities.

Apart from that funds are also utilized for financial assistance to faculty and staff members to attend seminars/conferences/workshops, seed money for research work, organizing national and international seminars/conferences.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes. It reviews teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals and records the incremental improvement in various activities

Response:

At AEC, IQAC was established in 2019 with representation from all necessary stakeholders. It aim to create a framework for conscious, consistent and catalytic action to enhance the institution's academic and administrative performance. The cell reviews teaching learning process, structure, methodologies of operations and learning outcomes of the Institute, at regular intervals to enhance quality, student's satisfaction and overall learning experience.

1. Significant contributions by IQAC for Quality Inhacement

Few major quality assurance strategiest of IQAC are as follows:-

Sl. No.	Initiative	Impact
1.	MoU with Coursera for offering one	There has been a significant rise in count of students g

	course per semester (free of cost) for all students and faculty members.	certification significant rise in count of students g certification. Till date more than five thousand students and faculty received certification.	
2.	Initiative for accreditation and ranking.	Three UG programmes namely B. Tech in CSE, ECE received NBA accreditation. NAAC IIQA before the set deadline of 31st March, 202	
3.	Creation of video repository for remote access by students for all courses offered by different programmes	Till date more than 10083 (approx.) video lectures prepared by faculty members which can be accessed by remote locations.	
4.	Introduction of Annual Academic and Administrative Audit.	A health completion among departments/units of the been developed to perform well in the audit. Best practices of other departments/units are now being others for improvement.	
5.	Focus on Organization of different FDP, Seminars and workshops etc.	The number of such events organized by institute has increased. The number of staff has participating in such activities increased.	
6.	Recognition and awards for students, faculty, and staff for their contribution into academic and research activities.	It has create a healthy competition among students, faculty to perform better and has lead to overall development of	

2. Review Mechanism of Teaching-Learning Process

IQAC has set standard formats for review of Teaching Learning methods and has assigned responsibility of checking/maintaining the information/data to various departments/units..

Cocerned Committee	Information Maintaned and Reviewed
Departmental Academic Committee (DAC)	<ul style="list-style-type: none"> • Course files (including lesson plans based on the academic calendar, time schedule, study material etc.) • CO, PO & PSO attainment and analysis • Extracurricular events conducted by the departments
Examination Committee	<ul style="list-style-type: none"> • Co-Based Question Paper • Student Result • Student List
T & P Cell	<ul style="list-style-type: none"> • Annual student placement record • Report on different training conducted
R & D Committee	<ul style="list-style-type: none"> • Publication, patent and grant related information

3. Review Mechanism of Attainment of Learning Outcomes viz. Course Outcomes (COs), Program Outcomes (POs) and Program Specific Outcomes (PSOs)

The institute employs the Outcome-based Education (OBE) approach as per the NBA guidelines, and in this framework, IQAC reviews CO attainment results (as submitted by DAC) when semester results are published. Further, IQAC also examines the accomplishment of POs and PSOs for each programme at the end of each academic session.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

6.5.2 Quality assurance initiatives of the institution include:

1. Regular meeting of Internal Quality Assurance Cell (IQAC); quality improvement initiatives identified and implemented
2. Academic and Administrative Audit (AAA) and follow-up action taken
3. Collaborative quality initiatives with other institution(s)
4. Participation in NIRF and other recognized rankings
5. Any other quality audit/accreditation recognized by state, national or international agencies such as NAAC, NBA etc.

Response: A. Any 4 or more of the above

File Description	Document
Quality audit reports/certificate as applicable and valid for the assessment period.	View Document
NIRF report, AAA report and details on follow up actions	View Document
List of Collaborative quality initiatives with other institution(s) along with brochures and geo-tagged photos with caption and date.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document
Link to Minute of IQAC meetings, hosted on HEI website	View Document

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Institution has initiated the Gender Audit and measures for the promotion of gender equity during the last five years. Describe the gender equity & sensitization in curricular and co-curricular activities, facilities for women on campus etc., within 500 words

Response:

Gender Equity is creating awareness that it is everybody's responsibility to ensure that women are given equal rights and opportunities in life. Our college takes numerous steps to ensure that our female students have equal access to all academic, co-curricular, and extracurricular opportunities. Equal opportunities are provided for students of both genders to mature and become competent, responsible citizens in the future. College makes an effort to ensure a gender balance in the administration, housekeeping, and faculty areas.

Our female students need to feel protected and secure because of the recent rise in violent crimes against women. As a result, we have taken steps to increase campus security. Asansol Engineering College features separate dormitories for boys and girls. Day students who ride college buses are divided based on gender, and female students are given access to a separate common area and sick room where they can unwind during break times or rest when ill.

In addition to these physical and intellectual resources, Asansol Engineering College provides clubs and committees that cater to the requirements of female students. They are the Women Cell, Grievance Redressal Cell and Anti-Ragging Cell. They make sure that issues with students are dealt with quickly and successfully. Every year on March 8—International Women's Day—respected female figures, licenced medical professionals, and psychiatrists are invited to speak to our girl students on managing a mixed-gender classroom and workplace. To ensure that complaints are addressed and to encourage prompt responses to student needs, a suggestion box has been set up on college property. Each department has a first aid kit on hand.

National identities and symbols

Students are urged to take advantage of every chance to recognise the virtues of our country and its rich range of cultures. These events and awareness campaigns make sure that students are informed about their civic responsibilities and that they exercise their rights in an appropriate manner without bothering others. In addition, the birth and death anniversaries of notable figures are commemorated to serve as a reminder to our students of their accomplishments and contributions to society.

Our constitution lists the following as fundamental rights: the right to equality, the right to freedom, the right against exploitation, the right to freedom of religion, the right to cultural and educational expression, the right to legal recourse, and the right to vote. Students are educated on their fundamental constitutional rights as well as their right to access college campuses for the purpose of academic learning.

Independence Day: Every year, we celebrate Independence Day to in still pride in our country.

Republic Day: Another significant national holiday, Republic Day, is observed by college students participating in a procession and hoisting the flag.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

7.1.2 The Institution has facilities and initiatives for

1. Alternate sources of energy and energy conservation measures
2. Management of the various types of degradable and nondegradable waste
3. Water conservation
4. Green campus initiatives
5. Disabled-friendly, barrier free environment

Response: A. 4 or All of the above

File Description	Document
Policy document on the green campus/plastic free campus.	View Document
Geo-tagged photographs/videos of the facilities.	View Document
Circulars and report of activities for the implementation of the initiatives document	View Document
Bills for the purchase of equipment's for the facilities created under this metric	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

7.1.3 Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit
2. Energy audit
3. Clean and green campus initiatives
4. Beyond the campus environmental promotion activities

Response: A. All of the above

File Description	Document
Report on Environmental Promotional activities conducted beyond the campus with geo tagged photographs with caption and date	View Document
Policy document on environment and energy usage Certificate from the auditing agency	View Document
Green audit/environmental audit report from recognized bodies	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

7.1.4 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and Sensitization of students and employees to the constitutional obligations: values, rights, duties and responsibilities of citizens (Within 500 words)

Response:

Asansol Engineering College has always been at the front position of sensitizing students to the cultural, regional, linguistic communal and socioeconomic diversities of the state and the nation.

To build a nation of youth who are noble in their attitude and morally responsible, the college organizes and conducted several activities to build and promote an environment for ethical, cultural, and spiritual values among the students and staff. To develop the emotional and religious feelings among the students and the faculty, commemorative days are celebrated on the campus with the initiative and support of the management for not only recreation and amusement but also to generate the feeling of oneness and social harmony.

The institute conducted Covid vaccination camp, where around 2428 participants were vaccinated successfully.

The college and its teacher and staff jointly celebrate the cultural and regional festivals, like Fresher Party ,teacher's day, orientation and farewell program, Induction program, rally, oath, plantation, Youth day, Women's day, Yoga day, festivals like gurpurab, Independence celebration, college foundation day celebration etc are performed in the campus.

The College always encourages the students to organize and participate in different programmes organized by college, inter-college, university and other Government or nongovernment organization to make them sensitize towards cultural, regional, linguistic, communal and socio economic diversities.

Besides academic and cultural activities, we have built up many strong infrastructures for a variety of sports activities for the physical development of the students. In this way the institute's efforts/initiatives in providing an inclusive environment for everyone with tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

7.2 Best Practices

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual

Response:

BEST PRACTICE – 1

1.1 Title of the Practice

Career Guidance and its impact on quality placement

Career counseling has the ability to enhance outcomes in employment, education, and training while reducing skill shortages and balancing the business cycle.

1.2 Objectives of the Practice

To provide proper guidance to the students so that they can explore and plan for career endeavors based on their knowledge, skills, and values.

- To facilitate the students in technical skills that is on high demand.
- To reduce the gap between industry and academia
- To Broaden students' breadth of knowledge and horizons by applying the skills and knowledge that are beyond curriculum to complement their learning at the institution
- To stimulate thinking, self-reflection, and self-understanding of students to promote their individual growth.

1.3 The Context

The criteria of today's competitive work environment influence and define job readiness. Appropriate training methodologies that have been implemented are based on a detailed analysis of the needs of various industries, and the training is carried out through recognized professional courses. They help our students get a strategic advantage in the recruitment process, broaden their perspectives as well as enhance their confidence and personalities. Our college placement orientation activities are unique as it not only strengthen technical knowledge, but also prepare students to enter the workforce with soft skills and product-based employability abilities, thus, making them industry ready.

1.4 The Practice

The institution offers well-organized Beyond Curriculum Training (BCT) courses to all students in all streams. BCT includes Value Added Courses, Skill Enhancement Trainings and Career Counselling and Guidance.

These courses are developed scientifically finding the gaps with the help of feedback on course curriculum from different stakeholders like Students, Alumni, Academicians and Employers. It is then approved by the respective Department's Academic Committee (DAC) followed by the IQAC/Academic Committee (AC).

Every student has the opportunity to enroll in different courses during their degree to develop their industrial competency. All accomplished students receive certificates.

1.5. Evidence of Success

During the previous five years, 161 Value Added Courses (each of minimum 30 hours); 131 Skill Enhancement trainings; 93 Career Counselling and Guidance courses and MOOC baskets were offered to the students of different departments, and the vast majority of students successfully completed them.

A total of 2360 students were placed in various companies whereas many students has opted for higher studies from different prestigious National and International Universities and are now placed in reputed firms respectively.

According to placement summaries for the last five years, students have continuously performed well, are hired by reputable firms, and the average salary has been rising each year.

1.6. Problems encountered and Resources Required

Problems Encountered

It is usually difficult to get learners to accept changes that are made for their benefit because they prefer easygoing learning and show little interest in learning outside the box, especially when it is related to their curriculum. To address this issue, the institution created a BCT basket that links to some of the rewarding events like the Internal Hackathon, Technical Fest, Show Your Talents, etc. in order to foster a sense of community among the students and encourage the development of their skills through BCT.

Resources Required

- Advanced software tool and computer facilities for training programs.
- Necessity of industry experts.
- Requirement of academic resource persons from other renowned institute of Higher repute.

BEST PRACTICE – 2

2.1. Title of the practice

Community Development Initiatives

Facilitate student participation in humanitarian endeavors that improve the lives of those who are economically and socially underprivileged and promote community growth.

2.2. Objectives of the practice

- To foster gender parity programs and concerns regarding women's education.
- To promote equality and social justice in the community by empowering people.
- To enhance the participation towards environment protection thus moving a step ahead towards sustainable development.

2.3. The Context

The community development programme is an initiative created to encourage improved living for the entire community through active community participation and initiative. Community development is crucial because it provides the base upon which a city may try to improvise the quality of life for its residents. Academic programmes now frequently incorporate community engagement, a social orientation, and environmental conservation approaches. Encouraging kindness and sharing among those who are socially and economically less privileged have been a primary concern of the Institute. Programs for community development are crucial to rural reconstruction.

2.4. The Practice

The Institution has been developing this approach by supporting all forms of social outreach and welfare initiatives. Students actively encourage and provide assistance to the less fortunate. The close mentor-mentee relationship that already existed in the Institute helped to strengthen this practice, further inspiring and motivating the students to strive for social improvement.

The institute takes various initiatives for the development of the community that helps in enhancing the societal values. During pandemic Covid – 19, several initiatives were taken by the institute so that aid, vaccines and books can be provided to the one who were in need.

2.5. Evidence of Success

Students along with the faculty members and staffs have been engaged in various outreach programs to help the socially and economically backward people. Programs such as distribution of food and necessary items have been initiated often to help the underprivileged. Several groups of students and faculty members of different clubs and units pay regular visits to old age homes and other care giving centers for destitute with the objective of helping them through distribution of necessary items.

Besides many of your Alumni and present students are associated with various NGOs and voluntarily donate for good causes.

2.6. Problems Encountered and Resources Required:

Problems Encountered-

Often, individuals in need are situated in remote or distant areas, making it inherently challenging to

extend social assistance to them. Furthermore, given the prevalence of numerous socially underprivileged individuals in the local community, providing accommodations for everyone becomes a complex task.

Resources Required-

- Connections with NGOs and welfare organizations
- Comprehensive database of neighborhood and nearby communities
- A dedicated vehicle equipped with necessary supplies

File Description	Document
Best practices as hosted on the Institutional website	View Document
Any other relevant information	View Document

7.3 Institutional Distinctiveness

7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

Response:

Institutional Distinctiveness

Institutional distinctiveness of any institution is a culture practised in the organisation and evolves from the commitment to the organisational goal supported by the management, faculty involvement and ownership and commitment among all stakeholders towards achieving the organisational vision.

To foster Holistic development, Asansol Engineering College (AEC) emphasizes on four-fold factors:

1. **Balanced & All-Round Development**
2. **Enhancement Emotional Intelligence**
3. **Physical Wellness**
4. **Socio-cultural sensitivity**

Balanced & Comprehensive Growth

Introduction: Balanced and Comprehensive Growth is a multifaceted concept that encompasses the holistic growth of individuals, institutions, and societies. In AEC we focus beyond academic achievements

and ensure intellectual, physical, emotional, and social growth. To foster such development, AEC holds several extra-curricular events with the purpose of providing an environment that nurtures diverse talents, skills, and abilities. The 'College Blue' award is introduced with this objective in mind that promotes not only academic pursuit but all-round development among students, where all students are judged on the following parameters:

1. **Adaptability**
2. **Communication**
3. **Leadership**
4. **Problem-Solving Skills**

Our Approach: To achieve Balanced and Comprehensive Growth, Asansol Engineering College (AEC) adopted a multifaceted approach:

1. **Inclusive Curriculum**
2. **Co-Curricular Activities**
3. **Mentorship**
4. **Emotional Intelligence and Wellbeing**
5. **Community Engagement**
6. **Skill Development Workshops**
7. **Continuous Assessment**

Conclusion: Balanced and Comprehensive Growth is not an isolated outcome; it is a journey requiring intentional efforts. By adopting a comprehensive approach encompassing academics, co-curricular activities, emotional intelligence, mentorship, and community engagement, AEC is nurturing individuals who are academically competent, socially responsible, emotionally intelligent, culturally sensitive and adaptable to the dynamic demands of the world. Such individuals are better prepared to contribute positively to society.

Enhancement of Emotional Intelligence (EI)

Introduction: In the modern world, academic excellence alone is not enough to thrive. The ability to understand emotions effectively has become a critical skill for personal and professional success. AEC recognizes the significance of EI and is committed to fostering its development among its students. This write-up elaborates on the importance of emotional intelligence and outlines AEC's approach in cultivating this skill.

Understanding EI: EI encompasses a range of skills that enable individuals to navigate emotions with sensitivity and wisdom. It includes self-awareness, self-regulation, motivation, empathy, and social skills. AEC strives to provide our students and faculty with the scope to improve their EI by adopting an integrated teaching-learning system.

Our approach involves:

1. **Curriculum Integration**

2. **Social-Emotional Learning**
3. **Interactive Workshops**
4. **Peer-support Initiatives**
5. **FDPs**
6. **Real-World Applications**

Benefits of Cultivating Emotional Intelligence: Developing emotional intelligence yields numerous benefits:

- **Effective Communication**
- **Conflict Resolution**
- **Resilience**
- **Leadership**
- **Mental Well-being**

Conclusion: We believe that EI is not just a skill, but a fundamental aspect of personal growth and success. By prioritizing EI alongside academic excellence, we empower our students to become well-rounded individuals equipped to thrive in all aspects of life. Our commitment to nurturing EI reflects our dedication to produce future leaders who will excel academically and contribute positively to the society with empathy, resilience, and effective communication skills.

Physical Wellness

Introduction: Physical wellness is a cornerstone of a fulfilling life, enabling individuals to maximize potential and contribute actively to society. AEC recognizes integral connection between physical well-being and overall success.

The Significance of Physical Wellness: Physical wellness is maintaining a healthy lifestyle through regular activity, nutrition, and rest. It positively impacts various facets of life, including academic performance, emotional balance, and personal satisfaction. By nurturing physical wellness, students gain energy, mental clarity, and resilience, which are essential for modern life.

Our Approach: AEC places a strong emphasis on physical wellness, integrating it into the daily lives of our students through various sessions and clubs focusing on:

1. **Physical Education**
2. **Nutrition Education**
3. **State-of-the-Art Facilities**
4. **Inclusive Activities**
5. **Lifestyle Promotion**
6. **Mental-Physical Connection**

Benefits of Embracing Physical Wellness: The benefits of prioritizing physical wellness are numerous and far-reaching:

- **Enhanced Learnability**
- **De-Stressing**
- **Increased Energy**
- **Healthy Habits**
- **Disciplined Teamwork**

Conclusion: Physical wellness is a cornerstone of student community. AEC is committed towards equipping its students with the knowledge, tools and opportunities they need to embrace healthy and active lifestyle. By nurturing physical wellness, we empower students to excel academically, emotionally, and lead fulfilling lives. Our dedication to physical wellness reflects our belief in holistic education.

Social & Spiritual Development

Introduction: In the journey of education, it is imperative to recognize that true growth goes beyond academic accomplishments. AEC understands the significance of nurturing not only the mind but also the soul and social connections. This write-up delves into the essential aspects of social and spiritual development and how our institute is dedicated to fostering these dimensions for the holistic growth of our students.

Understanding Social and Spiritual Development: Social development involves cultivating meaningful relationships, effective communication, empathy, and a sense of social responsibility. Spiritual development, on the other hand, refers to the exploration of values, beliefs, purpose, and inner fulfilment. Both dimensions contribute to an individual's overall well-being and their ability to navigate life's complexities.

Our Approach: Our educational institute believes in nurturing not just academic excellence, but also the qualities that shape well-rounded individuals. Our approach involves several strategies to encourage social and spiritual growth:

Social Development:

1. **Collaborative Learning**
2. **Community Engagement**
3. **Interpersonal Skills Workshops**
4. **Cultural Diversity Celebration**

Spiritual Development:

1. **Values Exploration**
2. **Mindfulness and Meditation**
3. **Ethics in Education**
4. **Philosophy and Wisdom Studies**

Benefits of Social and Spiritual Development: Investing in social and spiritual development yields numerous lifelong benefits:

- **Empathy and Compassion**
- **Strong Relationships**
- **Inner Fulfilment**
- **Ethical Decision-Making**
- **Global Perspective**

Conclusion: At our educational institute, we recognize the profound impact of social and spiritual development on the growth of our students. By fostering strong social connections and encouraging inner exploration, we aim to equip our students with the tools to thrive in an interconnected and diverse world. Our commitment to holistic education reflects our belief in nurturing not just knowledgeable individuals, but also compassionate, ethical, and spiritually aware citizens who contribute positively to the global community.

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5. CONCLUSION

Additional Information :

Since its establishment, Asansol Engineering College has upheld a reputation as a well-managed educational institution, earning recognition as one of the premier technical colleges in West Bengal. This achievement is attributed to the effective governance provided by the Board of Governors, employing a collaborative bottom-up approach that involves all stakeholders in the feedback and decision-making processes.

Central to the institution's success is its dedicated faculty, who continuously strive to enhance their teaching methodologies and provide students with Outcome-Based Education (OBE). The college adheres to a stringent educational policy aligned with the standards set by AICTE and the affiliating University. Vigilant oversight of the institution's overall quality is ensured by the Internal Quality Assurance Cell (IQAC).

Asansol Engineering College remains committed to its mission of producing highly skilled professionals across various Engineering and Technology disciplines. The campus boasts state-of-the-art infrastructure and well-equipped laboratories, leveraging cutting-edge technology to enhance the quality and relevance of teaching, research, and administrative processes.

Amidst the challenges posed by the COVID-19 pandemic, the institution has demonstrated its commitment to societal well-being. A notable initiative includes the establishment of a free vaccination camp for students, alumni, faculty, staff, and local residents, showcasing the institution's proactive engagement with its community.

Concluding Remarks :

Over the course of its 25-year journey, the Institute has significantly broadened its scope, achieving numerous notable landmarks. The institution takes pride in the achievements of its alumni, many of whom have excelled in diverse areas such as academia, business ventures, and the corporate world. Committed to its mission, the college continues to work towards its vision of providing impactful education that empowers and transforms the lives of its students.

The process of NAAC Accreditation serves as a valuable tool for the institution to establish a standard of quality benchmarks and criteria. It allows the institution to strive for excellence by focusing on continuous improvement in terms of quality. This accreditation is instrumental in advancing our efforts to attain autonomous status, ultimately leading to an enhanced ability to provide superior service to the student community. Moreover, the recognition from NAAC will significantly broaden the horizons for students in their career pursuits across all levels.

As part of its objective to attain autonomous status, Asansol Engineering College has taken proactive measures to achieve significant milestones within the accreditation process. Backed by a rich academic legacy spanning over 25 years, our institution is confident in its eligibility to secure a commendable NAAC Accreditation score, and we eagerly anticipate the subsequent phases of this process.

At Asansol Engineering College, we firmly believe that our remarkable progress over the past two and a half decades, encompassing advancements in infrastructure, academic pursuits, research endeavors, co-scholastic

activities, adeptness in embracing technological challenges, and contributions to the local community, stands as a testament to our alignment with NAAC's expectations.

The esteemed recognition from NAAC will stand as a significant marker in our historical journey of advancement. Moreover, it will serve as a source of motivation, propelling our endeavors towards engineering excellence with increased momentum.