Internal Quality Assurance Cell Report (2020-21)

As a quality enhancement and sustenance measure prescribed by the NAAC, the college constituted its Internal Quality Assurance Cell on 01-06-2018. As quality enhancement is a continuous process, the IQAC of the college continuously endeavors to help realizing the institutional goals. Since its inception, IQAC has been a vital part of developing a system for transparent, consistent and quality- driven initiatives in the college.

IQAC plays a utilitarian role in the participation of NIRF and also in the other Institution ranking by various organizations. IQAC conducts Institutional Annual Academic Audit and motivates the faculty members to participate in various National & International Conferences and also supports faculty members to attend various development programs conducted by other institutions/universities.

IQAC takes necessary steps to encourage faculty members to do the Certifications programs conducted by the organizations like NPTEL, Swayam, Coursera, Future Skills and AWS Academy to enhance the quality of teaching and thus preparing faculty members to teach students out of the box. It has been instrumental in helping the institution's plan and in monitoring quality initiatives. The pandemic slowed down and prevented some of the activities planned for further improvement of the college. Nonetheless, many plans were implemented and several others were taken up in this academic period. The following are some of the qualitative initiatives taken up by the institution:

Feedback mechanism & mentorship: The institution has a well structured feedback mechanism from all the possible stake holders' viz. Alumni, Industries, Potential Employers, and Representatives from Professional Bodies, Academia and Parents. The feedback mechanism is developed with an aim to capture the voice of the stakeholders to understand the demand driven needs of the stakeholders at different levels. Feedback is taken on institutional parameters such as infrastructural facilities, Academic performance, Students training, Placements, Research publications, Faculty training programs, Funded projects, Value added courses, Students Faculty achievements, Seminars and Conferences conducted, Faculty and student participation outside and Outreach programs. The feedback is collected through electronic mail communication and also during their visit to the Institution. The consolidated feedback received from various stakeholders

over a period of time; preferably once in six months are placed before the respective Board of Studies (BoS) for necessary discussion after having feedback analysis with internal members of BoS. Accordingly the changes are made for the final approval by the Academic Council.

Mentoring system is in place for students and 15-20 students are assigned to each faculty to support and guide the students for holistic development. The mentees are counseled 3 to 4 times in a semester and special attention is paid on a mentee if required. Academic progress of the students is continuously monitored before and after every examination and the slow learners are supported with extra inputs. Feedback and mentorship are crucial in institutional progression as it allows self reflection and continuous improvement. Feedback mechanism and Mentoring system function as the catalyst for the up-gradation of teaching-learning processes, developments in infrastructure and facilities, skill-enhancement and professional development of the faculty, capacity building and enrichment' of students. The online feedback mechanism offers a constructive, self assessment procedure integral to fostering and enhancing academic excellence and institutional development.

Academic calendar: The Avanthi Institute of Engineering and Technology prepares academic calendar based on the calendar that is issued by the affiliated university Jawaharlal University Technological University Kakinada for adherence to the academic schedule. However, each department also prepares an academic calendar at the commencement of each semester. It includes details regarding the schedules of lesson plans and various curricular and extra-curricular and co-curricular activities planned throughout the academic session for the benefit of students. Academic calendar is prepared at the beginning of each academic year and circulated among all the departments and also displayed on notice boards and website. Teaching plan is prepared by the faculty for the subjects they teach, and the same is circulated among the students at the beginning of each semester.

Strategic management of the pandemic crisis: COVID-19 led to unexpected challenges for everyone. Many members of the college were also adversely affected. Steps were taken to handle the prevailing situation better and provide interim relief to all the stakeholders. Some of the initiatives that were taken during this period included setting up a COVID task force, adding a few facilities to deal with the challenges caused by the pandemic and also providing fee exemption to students who tragically lost a parent because of the pandemic. The college organized various

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webinars and outreach programs to address the different challenges posed by the Corona virus.

Seminars/workshops/conferences: Despite the restrictions imposed due to the pandemic, the college faculty successfully conducted several seminars/workshops/conferences via online platforms using Google meet, Microsoft teams etc, The topics included discipline-specific quests, handling the challenges posed by COVID-19, physical and mental health wellness and career enhancement. 1QAC also conducted World Quality Day seminar for faculty and students. Experts are identified to give lectures on topics related to latest technological development, and topics of industrial interest and societal needs. Experts are invited from higher institutes of learning, industry and those in public administration and public life. The different types of learning digital tools used are:

- NPTEL Lectures e-learning,
- Resources ARM, CD, AC and EDX (MOOCS) MOODLES,
- MATLAB, PRO-II, COMSOL -for analysis of chemical systems Triangle simulation software for understanding process control systems
- NPTEL Videos are downloaded and video lectures are presented
- Moodle open source tool for online quiz examination, Brain storming technique
- Visual Chart working/Models
- Role play and Quiz
- Digital library Video Lectures
- Group Discussions/Seminars/Projects
- Webinar
- Access the MIT Lectures, from the internet of the individual faculty.
- E learning resources from ABB, IEEE, SIEMEN's

Outreach programs:

The college management has identified the social responsibility as one of the major priorities to act upon. The college has a dedicated NSS unit. The students and faculty are sensitized on such activities on every platform. Regular programmes are being organized by inviting visionaries from the society to interact with the faculty and students.

During this period, several extension activities for the benefit of different sections were planned

and executed. To this effect, two research projects sanctioned by the UGC and AICTE were undertaken by our faculty members. Besides this, various events ranging from spreading awareness about Corona virus, yoga as a health promotion tool and extracurricular programs were conducted through NSS for students. Vaccination drive, helping the needy at places like orphanages, providing medicines, masks, sanitizers, etc to the people of neighboring villages Chippada, etc are some of the activities undertaken by this group.

Augmented Digital Initiatives:

The Covid-19 pandemic has led to an inevitable surge in the use of digital technologies due to the social distancing norms and nationwide lockdowns. People and organizations all over the world have had to adjust to new ways of work and life. Technological tools for learning have become increasingly popular in education, as they allow students to access a wide variety of educational resources and activities. Some of the most common technological tools for learning include: online learning platforms, video conferencing tools (Zoom, Microsoft Teams, and Google Meet), online collaboration tools (Google Drive, Dropbox, and OneDrive), gamification tools (Kahoot, Quizlet, and Classcraft), and Virtual, Mixed and Augmented Reality tools, among others. Augmented Digital Initiatives has been reported to be a technology with positive effects on learning. The Internal quality assurance cell recognized the relevance of activities and their usefulness, and considered augmented digital initiatives as a meaningful educational tool. Micro soft teams / Management System of the college have been competently assisting in the automation of teaching and learning processes. It has also benefitted in automating most administrative functions as well resulting in a substantial reduction in paper consumption. This in-house platform supported the collection, assimilation and storage of data during the pandemic times. Augmented Reality can be a powerful tool to support project-based learning, as it can provide a more concrete and meaningful experience for students while allowing them to apply what they have learned in real situations. Several workshops and guest lecturers were organized in this regard to ease the process and enabled the faculty members and the students to be more skilled with the new online platforms. Attempts are also made in process to consolidate an event management application, which shall bring registrations, feedback and certificates under one digital platform.

Academic Audit:

The IQAC initiated the Academic Audit (AA) primarily to take account of teaching-learning

process in all disciplines, and to institutionalize documentation and record-keeping of academic matters of each department.

Objectives of the Practice:

- It helps in clarifying the roles and responsibilities of the teachers and thus avoids conflicts.
- Ensures effective use of available institutional resources.
- Facilitates educational quality improvement practices.

The audit assesses the program on several parameters such as the performance of students in exams, evaluation methods, student achievements, etc. It provides an opportunity for regular strategic overview of a college teaching learning process.

The process required a self-regulated assessment of teaching-learning process and a systematic management of documents. The audit was evaluated by the external auditors for the fulfillment of the procedures in teaching-learning process and the laboratory management. Academic audit gives an opportunity for continuous improvement on the part of faculty, thereby ensuring transparency in teaching-learning, evaluation and administration process of the institution and thus promoting holistic growth of students. An audit of this nature brings transparency, openness and accountability in the manner in which internal evaluation is conducted and has a noticeable impact the quality of teaching.

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