



RESEARCH ARTICLE

DEPARTMENT INFORMATION SYSTEM-KNOWSOFT

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ABSTRACT

Department Information System-know soft provides a simple interface for maintenance of department information according to National Board of Accreditation (NBA) (Ilango, 2013). Know soft means getting complete details of Department through software. It can be used by educational institutes or colleges to maintain the records of students easily (Bharamagoudar *et al.*, 2013). The creation and management of accurate, up-to-date information regarding a department is critically important in the university as well as colleges. Department information system deals with all kind of student details, faculty details, infrastructure details, academic related reports, facilities in department, course details, curriculum, batch details, placement details and other resource related details too. All these details will be available through a secure online interface embedded in the department's website.

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INTRODUCTION

The New Education Policy of 1986 recognized the need for a Statutory Body at the National level responsible for overseeing the growth and quality of Technical Education in the country. Accordingly, All India Council for Technical Education (AICTE) was established by an Act of Parliament in 1987. National Board of Accreditation (NBA) (Ilango, 2013) was originally constituted in September 1994, in order to assess the qualitative competence of educational institutions from Diploma level to Post-Graduate level in Engineering and Technology, Management, Pharmacy, Architecture and related disciplines. NBA conducts evaluation of programs of technical institution on the basis of laid down norms. NBA in its present form has come into existence as an autonomous body with effect from 7th January 2010, under the aegis of AICTE, with the objective of assurance of quality and relevance of technical education through the mechanism of accreditation of programs offered by the technical institutions.

Vision of NBA

The vision of NBA is "to be a world class accrediting agency by ensuring highest degree of credibility in assurance of quality and relevance of professional education and come to

the expectations of its stake-holders viz. academicians, corporate, educational institutions, government, industry, regulators, students and their parents".

Mission of NBA

NBA is working with the Mission, "to stimulate the quality of teaching, self-evaluation and accountability in higher education, which help institutions realize their academic objectives and adopt teaching practices that enable them to produce high quality professionals and to assess and accredit the programs offered by colleges and/or institutions imparting technical and professional education."

Scope

- The scope of the accreditation by NBA is to promote and recognize excellence in technical education in colleges and universities.
- Support and advice to technical Institutions in the maintenance and enhancement of their quality of provision.
- Assurance of the good standing of an Institution to government departments and other interested bodies.
- Enabling an Institution to state publicly that it has voluntarily accepted independent inspection and has satisfied all the requirements for satisfactory operation and maintenance of quality in education.

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Criteria's

There are 10 criterions provided by NBA that all the NBA accredited institutions should follow.

Criterion 1: Vision, Mission and Program Educational Objectives (PEOs)

In this criterion, we state the vision and mission of the Department and Institute, Program Educational objectives and indicate where the vision, mission and PEOs are published and disseminated among stakeholders. The PEOs should be assessable and realistic within the context of the committed resources. The comprehensive list of various stakeholders of the program, who have been involved in the process of defining and redefining the PEOs, is to be provided. While framing the PEOs, the following factors are to be considered:

- The PEOs should be consistent with the mission of the institution.
- All the stakeholders should participate in the process of framing PEOs.
- The number of PEOs should be manageable.
- It should be based on the needs of the stakeholders.
- It should be achievable by the program.
- It should be specific to the program and not too broad.
- It should not be too narrow and similar to the POs.

Criterion 2: Program curriculum and teaching-learning processes

This module states that the process used to identify extent of compliance of the university curriculum for attaining the program outcomes and program specific outcomes and also states the delivery details of the content beyond the syllabus for the attainment of POs and PSOs. This describes processes followed to improve quality of teaching and learning and also quality of internal semester question papers, assignments and evaluation. The structure of the curriculum, which comprises course code, course title, total number of contact hours (lecture, tutorial and practical) and credits, is to be provided. The institution must ensure that the program curriculum that was developed at the time of inception of the program has been refined in the subsequent years to make it consistent with the PEOs and the POs. The institute shall provide the required information for assessment, evaluation and review methods to evaluate the attainment of COs.

Criterion 3: Course Outcomes and Program Outcomes

This module establishes the correlation between the courses and the program outcomes and program specific outcomes (PSOs) and also describes the attainment of course outcomes.

The attainment of POs may be assessed by direct and indirect methods. Direct methods of assessment are essentially accomplished by the direct examination or observation of students' knowledge or skills against measurable performance indicators. On the other hand, indirect methods of assessment are based on ascertaining opinion or self-report. The results of assessment of each PO shall be indicated as they play a vital

role in implementing the Continuous Improvement process of the program.

Criterion 4: Student performance

- (i) Students admitted to the program must be of a quality that will enable them to achieve the program outcomes. The policies and procedures for student admission and transfer should be transparent and spelt out clearly.
- (ii) The educational institution should monitor the academic performance of its students carefully. The requirements of the program should be made known to every student.
- (iii) The educational institution must provide student support services including counseling /tutoring/mentoring.
- (iv) The institute shall provide the required information for three complete academic years for admission intake in the program, success rate, academic performance, placement and higher studies and professional activities as per the format given in the SAR (NBA Self Assessment Report (SAR), 2015). However, it shall provide the information in a suitable format, wherever necessary, in case the format is not provided in the SAR.

Criterion 5: Faculty information and contributions

- (i) The faculty members should possess adequate knowledge / expertise to deliver all the curricular contents of the program.
- (ii) The number of faculty members must be adequate so as to enable them to engage in activities outside their teaching duties, especially for the purposes of professional development, curriculum development, student mentoring/counseling, administrative work, training, and placement of students, interaction with industrial and professional practitioners.
- (iii) The number of faculty members must be sufficiently large in proportion to the number of students, so as to provide adequate levels of faculty-student interaction. In any educational program, it is essential to have adequate levels of teacher-student interaction, which is possible only if there are enough teachers, or in this case, faculty members.
- (iv) The faculty must be actively involved in research and development
- (v) The academic freedom to steer and run the program will be in the hands of members of the faculty.
- (vi) The faculty must have sound educational qualifications, and must be actively updating knowledge in their respective areas of interest.

Criterion 6: Facilities and technical support

- (i) The institution must provide adequate infrastructural facilities to support the achievement of the program outcomes. Classrooms, tutorial rooms, meeting rooms, seminar halls, conference hall, faculty rooms, and laboratories must be adequately furnished to provide an environment conducive to learning. Modern teaching aids such as digital interactive boards, multimedia projectors etc., should be in place to facilitate the teaching-learning process so that program outcomes of the program can be achieved.

- (ii) The laboratories must be equipped with computing resources, equipment, and tools relevant to the program. The equipment's of the laboratories should be properly maintained, upgraded and utilized so that the students can attain the program outcomes. There should be an adequate number of qualified technical supporting staff to provide appropriate guidance for the students for using the equipment, tools, computers, and laboratories. The institution must provide scope for the technical staff for upgrading their skills and professional advancement.
- (iii) The institute shall provide the required information for class rooms in the department, faculty rooms in the department, laboratories in the department to meet the curriculum requirements as well as the POs, and technical manpower in the department as per the format given in the SAR.

Criterion 7: Continuous improvement

- (i) Modifications in the program curriculum, course delivery and assessment brought in from the review of the attainment of the PEOs and the POs, will be helpful to the institutions for continuous improvement. The program must develop a documented process for the periodic review of the PEOs, the POs and the COs. The continuous improvement in the PEOs and the POs need to be validated with proper documentation.
- (ii) The institute shall provide the required information for continuous improvement for three consecutive academic years as per the format given in the SAR (NBA Self Assessment Report (SAR), 2015).

Criterion 8: First year academics

This module states the first year Student-Faculty Ratio (FYSFR), qualification of faculty teaching first year common courses and academic performance. It also states the attainment of course outcomes of first year courses.

Criterion 9: Student support systems

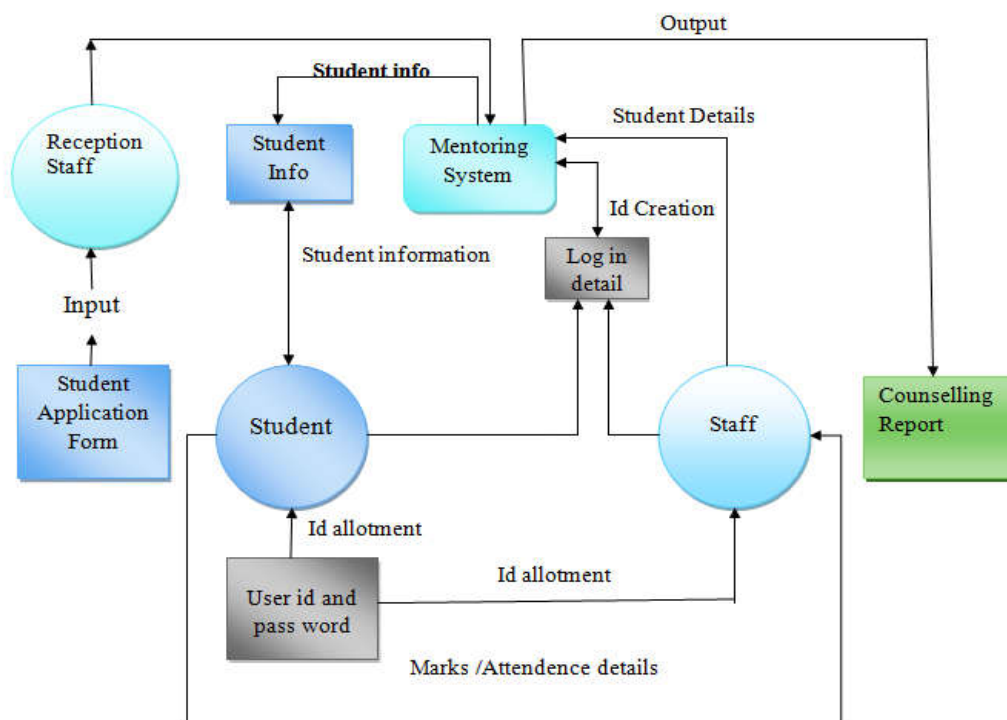
- (i) This module states the mentoring system to help at individual level, feedback analysis and reward/corrective measures taken, if any and also states the feedback on facilities and self-learning.
- (ii) In Mentoring system each staff is allotted with 15-20 students, these 15-20 students are mentored by respected mentor based on their performance in academics as well as in extracurricular activities.

Criterion 10: Governance, Institutional Support and Financial Resources

- (i) The governance structure of the program must clearly assign authority and responsibility for the formulation and implementation of policies that enable the program to fulfill its mission. The program must possess the financial resources necessary to fulfill its mission and PEOs. In particular, there must be sufficient resources to attract and retain well-qualified staff, and to provide them with opportunities for continuous development and career growth. The program's budgetary planning process must also provide for the acquisition, repair, maintenance and replacement of physical facilities and equipment.
- (ii) The educational institution must have a comprehensive and up-to-date library and extensive educational, technological facilities.

Mentoring system

This Mentoring system is very important part of student support system for criteria 9 and as well for course file. The format and action plan of this mentoring system include followings



Action plan of mentoring system

- Each Staff is allotted a minimum of 15-20 students by the course co-coordinator and these students will be from the same semester.
- The same students will be continuing with mentor until the completion of course.
- The format of mentee should be filled and kept update periodically, with the help of the class co-coordinators.
- The format contains 5 pages, only the last two pages will change every semester. This format is to be done for each student.
- The class co-ordinate of the different class will support this system strongly, by maintaining a soft copy of the consolidated attendance and IA-performance of the entire class. These marks are centralized in our staff drive, for filling in mentee format, by the respective mentors (staff).
- Every student has to meet their mentor compulsorily. This should be monitored by the class co-coordinator, very strictly, by maintaining the consolidated counseling report of the students. If a student fails to meet the allotted mentor, the same should be informed to course co-coordinator for further action
- Average students will be counseled after every Internals.
- If the students is poor either in attendance or IA or found involved in any misbehavior (in class or campus). Strict counseling should be done immediately and if it's serious, the parents can also be involved. The same report should be submitted to the class co-coordinator and HOD.
- At the end of the semester the consolidated counseling report has to be submitted to the course co-coordinator.
- The figure below shows how mentoring system will work,

There is login into mentoring system for faculty, through the reception faculty the students can also login into mentoring system. After login student will enter his personal details and also staff enter their respected mentee academic details like attendance and IA marks. Based on details the software will generate a counseling report for each student. Then the mentor is going to take necessary action on the mentees.

Benefits of mentoring system

- Mentoring system helps the students to improve at individual levels.
- Counselling creates self-confidence.

Conclusion

This project provides the overall Department information according to National Board of Accreditation for accessing the Department across the Nation. This provides benchmark for grading the courses at National and International level. Automization of the Department Information System.

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