



Best Practices

D) Mentoring/ Counselling System

1. Title of the practice: Mentoring/ Counselling System

2. Goal: The Mentoring system assigns a faculty member to every student; the faculty plays the role of a personal mentor for the student in all matters. For the institute, the mentor is the first point of reference for all matters concerning any specific student. The mentor guides the student at every step of their stay at the institute to be successful at whatever the student takes up. The mentor personally ensures that the student is aware of all the resources available for the student during their course of study at the institute.

3. The context: The mentoring system is relatively new in general to a student entering the institute. The students do take some time to familiarize and feel more comfortable with their mentors and most importantly develop confidence in them.

The students meet their mentors to consult with them regarding courses to take and to guide them through the registration process. The students then meet their mentors after every internal assessment test to update them on their progress in performance. The mentor identifies students who may need extra attention to improve their performance and schedules more interaction with them.

4. The practice: He is a personal mentor and counsellor for the duration of stay of a student at the institute. A mentor represents a parent away from home for a student and is the first point of reference for the activities of a student during the complete course of study at the institute. As soon as a student enters into the institute, a faculty member is assigned to take over the role of a mentor for the student.

The mentor not only guides the student in academic matters but also any matter of concern for the student. The student seeks the advice of the mentor at every step of their course of study beginning from the registration for courses at the start of every semester. The students meet their mentor regularly. However, depending on students need the mentor conducts more meetings with their students and their parents. The mentor educates the student about the various course requirements, such as the mandated minimum and maximum course load every semester, and how to choose electives. The mentor helps the student channel their interests and energies effectively during the complete course of study at the institute.

The students meet their mentors for various reasons; some students would like extra help with the material in a course and are shy to approach a new instructor assigned to the course, few



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might be facing problems adjusting to the new environment may be in the hostel or at other places around the institute, some others would like to know about their options of availing various resources at the institute and participating in various extra-curricular activities like joining a debate club at the institute, group students would like to know about their options for going through internships during the break or even the benefits of the same, few might want to do some minor project work or participate in various competitions in addition to their courses, some other might want to seek guidance after graduation and how to figure out where they would fit in better. At times the students might just need someone who can give them personal time and attention by listening to their struggles in transitioning from high school to a higher education environment and finally in becoming a constructive member of society.

5. Evidence of success: The most important evidence of success for the mentoring system is from the testimonials of the end-users. The students and their parents have been very happy with the mentoring system. Generally, for the complete duration of the course of study of a student any one faculty member has been effective in assuming the role of a mentor. The behaviour of the students on the campus, in general, has witnessed a tremendous improvement and the students are much happier and contended with their course of study at the institute after the implementation of the mentoring system.

The pass percentage and the average academic performance of the students have also achieved greater heights with this practice. Some students have presented themselves as quite a challenge for their proctors, but they figure out their priorities and start performing better after counselling sessions with their mentors. The students have been at most risk during their initial stages in the course of study. The transition from a high school environment to a higher education set-up proves to be too sudden for some students. The mentoring system has addressed the needs of the students and effectively nurtured many students during the duration of its implementation.

6. Problems encountered and resources required: Despite our best efforts in the effective implementation of the mentoring system, there is still a small percentage of students who discontinue their course of study at the institute. The percentage of dropouts did reduce after implementing the system, but still few cases remained unsolved. Some students have required a great deal of time and effort from their mentor but have shined after. However, the depression that a small percentage of students went through was too critical for us to handle. We are planning to establish a centre with professional counsellors.

II) Foundation courses

1. Title of the practice: Foundation courses



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2. Goal:

To develop, consolidate and strengthen mathematical skills and techniques that are essential to pursue an undergraduate program in engineering.

3. Context:

Courses have been designed to provide a sound foundation in function, Calculus, Trigonometry and Differential Equations. These courses develop mathematical content to support further studies. This understanding will help faculty to improve and augment students' performance in their first year of engineering education.

4. The practice:

The most significant principles related to teaching and learning of mathematics includes the expectations that teachers know what students need to learn based on what they already know. Tasks are built on students' prior knowledge, moulding their weaknesses of their subject knowledge of the lower class, making connections to concepts, procedures, and understanding.

5. Evidence of success:

The majority of taught classes will begin with a short "lecture" introducing and explaining concepts but the majority of the time in each session will be devoted to students completing formative exercises to build and develop their learning skills. The pass percentage and the average academic performance of the students have also achieved greater heights with this practice.

6. Problems encountered and resources required: In spite of all the motivation extended to the students to attend the foundation courses, some of them are home-sick/de-motivated for various reasons and do not take this seriously. However, the percentage of this category is very small and hence we continue to push a maximum number of students to get benefitted by this foundation courses.

III) Project-based learning:

1. Title of the practice: *Project-based learning* for elective subject MSP430 Microcontroller

2. Goal: To given practical experience in learning the subject

3. The context: Students were given hands-on training (out of the syllabus) in various MSP430 microcontroller development boards and also software tools like IAR Embedded workbench, Code composer studio, and Energia.



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4. The practice: A practical session was conducted once a week to teach the students and practice. Students used to learn to execute the related programs and learn the subject practically. At the end of the semester, students who opted the MSP430 as the elective subject had done a mini project and successively completed.

5. Evidence of success: Students have completed mini-project and scored good marks with 100% result.

IV) COE Activities:

1. Title of the practice: COE Activities for Students

2. Goal: Bridge the gap between industry and academia by making students *Industry ready*

3. The context: In Atria, three different domain activities are conducted for students 4th and 6th semesters under the VLSI, Signal Processing, IoT and Embedded system COE. These activities are conducted to train our college students in various industrial aspects to make them Industry ready.

4. The practice: Students will be trained with hands-on experience on industry-standard tools like CADENCE in VLSI domain, MATLAB and SIMULINK in signal processing domain, and Code Composer Studio and similar tools for IoT and embedded systems.
(A detailed content planned is shared with mail).

5. Evidence of success: Just started (affected by COVID-19)

6. Problems encountered: Number of sessions assigned to each domain activities seem to be less.