

## **Best Practice – 1**

### **1. Title of the Practice:** Teaching, Learning and Continuous Monitoring of Academic Standard

### **2. Goal**

- An ability to apply knowledge of mathematics, science and engineering.
- An ability to identify, formulate and solve engineering problems.
- An ability to design and conduct experiments, analyze and interpret data.
- An ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, and safety manufacturability and sustainability.
- An ability to function on multi-disciplinary teams.
- The ability to use modern engineering tools, software and equipment to analyze problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively in both verbal and written form effectively.
- Knowledge of impact of engineering solutions on the society and also on contemporary issues.
- Recognition of the need for, and an ability to engage in self-education and life-long learning.
- An ability to use the techniques, skills and modern engineering tools necessary to face competitive examinations and engineering practices.

### **3. The Context**

The college has an extremely talented faculty who are hugely interested to pursue their academic endeavor in the college. The College has an Academic Council to chalk out institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs for teaching, learning and monitoring. It has stipulated the following strategies:

- Student centric teaching is adopted throughout
- Extensive course material is prepared
- Projects are taken up by students in the final year
- Semester lab manuals are prepared
- Regular feedback is taken from the students
- Students are asked to give seminars regularly

### **4. The Practice**

The institution adopts all possible steps to improve teaching, learning and monitoring academic facilities in the institution.

- The quality and quantum of the lecture methods and learning strategies (lecture, discussion, group discussion, question answers, case studies, role play, illustrations, and special lectures) depend upon the topics being dealt with.
- Most of the courses and professional courses have practical sessions, projects, seminars and comprehensive viva-voce components in their curricula, besides the usual classroom interactions.
- All departments also provide instructional materials to the students for easy understanding of the concept and subject matter.

- Team project works, assignments, case studies, preparation of charts, models, quiz programs are also followed.
- Expected Results/outcomes obtained from development plan and results
- Key priorities such as teaching and learning process, risks identified in the planning stage
- Data collection through feedback and stakeholder meeting.
- Estimation of resources required and committed for carrying out planned monitoring activities.
- Staff members have to fill in the Self Appraisal form monthly. The Head of the College gives them constructive feedback regarding the same.
- Monthly staff meetings are held to take stock of the activities undertaken by the various Committees.
- IQAC monitors the development and application of quality benchmarks for plans and policies of the institution.

## **5. Evidence of Success**

The impact of the above practice to inculcate a Research Culture among the faculty of a UG College and also among the students is evident in the following data given below:

- Experienced, dedicated and highly qualified faculty members.
- State of the art laboratories, library and workshop.
- Applied research activities are undertaken in the institutes.
- Envious university results and noticeable placements
- Provided computer and internet facilities for all departments.
- Purchased books and journals according to the needs of the faculty and students.
- Signed MoU with different organizations for academics, training and placement.
- In last four years 4 faculty members have taken academic leave for completing their Ph.D. work.

## **6. Problems Encountered and Resources Required**

- Syllabus, being prepared by university, is not updated properly.
- Fixing of Teaching level due to heterogeneous standard of students in a class.

## **7. Notes (Optional)**

Due to excellent practices in teaching and learning process, the institute attracts students not only from the state of Odisha but also from other nearby states.

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### **Best Practice – 2**

**1. Title of the Practice:** Promotion of Research Culture in the College

#### **2. Goal**

- To encourage and inculcate a Research Culture among the faculty.
- Encourage faculty to undertake research projects both major and minor and publish books and also research papers in national and international journals.

- Encourage faculty to pursue Ph.D. programmes and organize college/regional/state/national/international level seminars and workshops.
- Develop scientific temper and acquire research skill among the faculty.
- Encourage by providing necessary supports to the faculty to present papers and attend national and international conferences and seminars.

### **3. The Context**

The college has an extremely talented faculty who are hugely interested to pursue their academic endeavor and research activities in the college. The College has set up GITA Research Monitoring Cell and a Research Committee to chalk out institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researchers. It has stipulated the following strategies:

- Updating the teachers regarding the various fellowships and facilitate in applying for the same.
- Monitor that infrastructural facilities are provided in the College premises to carry out Major and Minor Research Projects.
- Recommends for Leave to present research papers in seminars, conferences and workshops by the faculty members.
- Based on the suggestions of the committee the college authority has provided Computer with Internet and Reprographic facilities to all faculty, Procurement research oriented journals & e-journals.
- Promotes to organize interdisciplinary programmes related to research of the faculty and exchange of ideas.

### **4. The Practice**

The institution encourages and extends all possible help to promote research activities in the institution.

- The Institution makes all necessary arrangements for timely availability or release of resources for smooth progress and implementation of research schemes/projects.
- Adequate infrastructure and human resources are provided by the institution for smooth progress and implementation of research schemes/projects and other research initiatives.
- Full autonomy is given to the Principal Investigator by the institution to facilitate smooth progress and implementation of research schemes/projects.
- Encourages and leave are sanctioned for presenting research paper in different International and National Conferences by faculty.
- Provides computer and internet facilities for all departments.
- Purchases books and journals according to the needs of the faculty.
- Promotes Publications as Edited Volumes on research articles
- Conducts National/State/Regional level workshops/seminars/conference.
- Internet, LAN and journals and e-journals subscriptions are made available to all faculties to facilitate research activities in the college.
- By inculcating practical aptitude among students through participation in experimental exercises.

- By arranging seminars and conferences whereby students have ample opportunities to interact with eminent researchers.
- Teachers are motivated in the department to pursue at least one minor/major research project in their area of specialization or one that is inter-disciplinary in nature.
- Teachers who have not started their Ph.D. work are also motivated to register for such programmes.
- various departments, Units and staff of the institute interact with each other in undertaking inter-disciplinary research.

## 5. Evidence of Success

The impact of the above practice to inculcate a Research Culture among the faculty of a UG College and also among the students is evident in the following data given below:

- Recognised by Utkal University, VSSUT, SOAU, KIITU as a Research Center.
- The college authority has provided space in each department to carry out research activities for the faculty.
- Provided computer and internet facilities for all departments.
- Purchased books and journals according to the needs of the faculty.
- Receive grant form DST.
- Signed MoU with different organizations.
- In last four years 4 faculty members have taken academic leave for completing their Ph.D. work.
- At present 30 faculty members are enrolled in different universities of the state for their Ph.D work.
- More than 30 faculty members have presented papers national and international conferences and seminars
- Faculty have published and presented a large number of research papers in various National/International seminars in their individual capacity.
- A licensed version of ANSYS has been purchased for 20 computers.
- The laboratories are enriched with research oriented equipments.
- The Institute has its own research journal IJRAS available in the url:[www.ijras.in](http://www.ijras.in)

## 6. Problems Encountered and Resources Required

- Problem of writing and publishing of papers because of more number of teaching hours for UG programmes.
- Due to private college, non availability of enough financial resources

## 7. Notes (Optional)

Interest in research of the faculty has motivated the college authority to promote research culture in the institution. Within the limited resources and space available the college always stays besides the faculty to pursue active research in the institution.

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### Best Practice – 3

#### 1. Title of the Practice: Student – Teacher Mentoring Programme

## **2. Goal**

- To help identify career paths for students and support students' personal growth.
- To provide an opportunity for students to learn and practice professional networking skills.
- To equip students with the understanding and tools to make ethical and informed decisions.
- To shape students into confident graduates with excellent leadership, communication, critical thinking, professionalism and other skills important to the transition to the world of work.
- To help students identify and pursue opportunities for employment related to their degrees.
- To provide a framework by which a student can judge the success of his/her learning and assist self-reflection and self-assessment.
- To use achievement standards, learning intentions and success criteria as the main focus of the teaching and learning plan.
- To identify the focus for ongoing teaching, learning and assessment.
- To determine specific strategies to support preferred learning styles, environments or modes, thinking skills, personality traits, and previous experiences.
- To provide students with timely, specific and corrective feedback so that they are able to evaluate their own progress and identify future learning goals.
- To provide comments on student progress to enrich reporting information to parents.
- To plan ongoing communication strategies with parents about student progress
- To understand his/her professional and ethical responsibility.

## **3. The Context**

An engineering graduate during the four years of the course is subjected to many phases of life where a personal touch coupled with educational and professional guidance is very vital. And this is achieved through our "Student Mentoring System." For finer nuances e.g. career options or fear of a subject/course need greater involvement of the mentor. A designate mentor remains with the respective mentees for the entire four years. A similar system as discussed above, namely 'Faculty Advisor' exists in this college since its inception. This system is put diligently into practice and certainly helps in improving the overall academic experience of the students.

## **4. The Practice**

The institution adopts all possible steps to improve the student teacher mentoring system in the institution.

- Each faculty is the mentor of maximum 20 students.
- Mentors are trustworthy, approachable, supportive, empathetic, positive, non-judgmental and good listeners.
- The mentor is a local guide, educational companion and agent of change for the student.
- Mentors have the skills to observe and provide constructive feedback.

- The mentors continuously monitor, counsel, guide and motivate in all academic matters.
- They help in choice of electives, project, summer training etc.
- Contact parents/guardians if needed, for academic irregularities, negative demeanour, detrimental activities etc.
- Advise students in career choices.
- Keep in touch even after their graduation.
- Suggest the HODs for administrative action.
- Maintain a detail progressive record of the student.
- Maintain a record of all discussions with students.
- The HODs Meet all mentors of his/her department at least once a month to review the proper implementation of the system
- The Controller of Academics keeps a daily record of the mentorship proceedings and places it before the Academic Council on a monthly basis.
- The Academic council of the institution after proper examination of the records places it before the Principal with necessary suggestions for the effectiveness of the programme.
- The Principal forwards the proposal to the IQAC for necessary discussions and implementation.

## **5. Evidence of Success**

The practice of student teacher mentoring programme with specified objectives has brought about significant changes in the various aspects of a student such as academics, behaviour, responsibility and brotherhood. Some of the evidences are noted below which depicts the success of this programme.

- The students are attending more than 85 percent of the classes regularly.
- The University result is improving year after year.
- The students are engaged in doubt clearing after the recommendation of the mentor.
- The students feel free to discuss their problems, social, psychological and personal, with their mentors.
- The students get involved in research work.
- They become more and more interested to represent the college in various co-curricular and extra-curricular competitions.
- The indiscipline activities in the campus have gone down miraculously.
- None of the students was engaged with any activity relating to ragging.
- The senior students adopt a brotherly attitude to solve the problems of the junior students.
- The parents of the students feel free to discuss about the problems of their wards with the mentors.

- Both the students and their parents help the institution in increasing the admission status.

## **6. Problems Encountered and Resources Required**

As every programme faces some unexpected problems at the beginning, the institution has also faced some trivial issues such as-

- The students did not cooperate at the beginning as they are afraid of sharing their problems.
- The parents could not rely on the faculty members.
- The students did not attend one to one counselling classes.
- The seniors tried to dominate over the juniors and freshers.

However, the Management of the institution and the college administration have provided all necessary resources to make this programme highly effective. The resources provided are as follows.

- A specified counselling room.
- Easy access to all the facilities by the mentors.
- Quick response in terms of health, food and maintenance problems.
- Quick redressal of grievances.

## **7. Notes (Optional)**

The student teacher mentoring programme has developed a sense of belongingness in the students as well as faculty members. A moral and emotional relationship has been developed between the students and the teachers. The students now feel proud for becoming a part of this institution. This programme has solved almost all the minor problems of the students at the instant. The institution is always trying to make this programme more and more effective by implementing new ideas.