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

Best Practice 1:

1	**Title of the Practice**	**Industry – Institute Relation towards Skill Development**
2	**Goal**	• To impart the Engineering skill expected from the industries • To bridge the gap between the industry and academia • To make the students job-ready by the end of the program • Groom the students to become Entrepreneur
3	**The Context**	There is a need to create avenues for a close academia and industry interaction through all the phases oftechnology development, starting from conceptualizing to commercialization. Students need to be skilled to work on innovative ideas. The industrial linkages will help the Institution and hence the students; It should continue for longer period for preparing the manpower of world class in the field of technology by inculcating various skills required by the industry, thereby contributing to the economic and social development at large. • To help design, develop and deliver training modules for students that they are made industry-ready • To help the faculty to understand expectation of industry so that they can align their teaching to the needs of the industry • To facilitate internships/ in-plant training/ industrial project for students to ensure that they get industry exposure during their campus days, which leads to better employability • To groom them an Entrepreneur by inviting achievers of the industries.
4	**The Practice**	The various types of interactions between academic institute and industry and also at the same time the requirements of industry from academic institution are addressed regularly. It is evident that collaboration of industry and institution in skill development leads to innovations. This practice creates healthy environment in the country by which there will be an all round development. Institution has an explicit division for industrial linkage which houses placement division under the headship of a director. They play a pivoting role to link the industries with departments based on the requirement. The best practices of our Institute to enhance the interaction between Industries and Institute are; • Industrial visits/tours

		• Industrial training/internship • Industrial project • Industrial consultancy • Product development through collaboration • Inviting industrialist as guest speaker/expert • Arranging the hands-on training in the cutting edge technology • Entrepreneur development awareness program • Online courses for filling the industrial gaps Students are visiting the industries as a normal procedure and encouraged to undergo industrial training and internship during their winter and summary holidays. Industrial linkage division is arranging the industries to the students to undergo training. Students are encouraged to take up industrial project which help them to understand the industrial requirement. IPR cell is conducting seminars and encouraging the students/ faculty members to register for patent if their project has novelty. Faculty members are encouraged to take the consultancy work from the industries. Students areinvolved in the development which gives more hands on industrial project. Guest lectures are organized by each department to fill the gap between the academia and the technology expected from the industries. This will enable the students to study content beyond the syllabus to make themself industry-ready. Each department conduct value added course for the benefits of students. This will helpthe students to update their knowledge in cutting edge technology. Online course linked with industrialneed are announced by the department so that students can have the international certification. Department invites industrial expert for the expert lecture, functions and activities. Students could interact with the industrialist and discuss their doubts directly. Students could able understand the corporate ethics and expectation from them
5	**Evidence of success**	• On organizing the Industry Explorer Conference(i4), faculties and students are exposed to industrial expectations tofocus on the real time skill set.Performance is improved by 20% in placement.Increase in participation of students in attending internshipIndustry understands the need of institution and has come forward to offer Implant Training,Industrial Visits/Projects with our continuous efforts. • More online courses (industrial skill) registration by students and staff. • Innovative projects are identified and and in the process to apply for IPR. • Enhancement of problem solving skill to face the challenges associated with carrying out investigation

		• Students are encouraged to participate in design contests.
6	**Problems Encountered and Resources Required**	• Students' communication is a biggest threat due to their family background • Interface with leading industries is a mighty task • Getting Industrial training/ project in software industries is a difficult task • The institution is far away from the Industrial corridor.

Best Practice 2

1	**Title of the Practice**	Creation of Awareness among Faculty and students about their social responsibility.
2	**Goal**	To develop ethical and moral values among Faculty and students.To create harmony and peace among the Faculties and students and non-technical staff.To develop emotional quotient and spiritual quotient along with intelligent quotient.To imbibe education among the Faculties and students for the development of the society and community
3	**The Context**	To develop society, the institute has decided to create engineers having social, ethical and moral values. The need of the society today is to develop budding engineers having research mindset, ethical values and entrepreneurship skill.The young generation is very volatile and it is the necessary to bring awareness among them regarding their social responsibilities
4	**The Practice**	Institute conducts the program on National Service Scheme to understand the social responsibilities. Institute understands the importance of learning the life skills & organizes co-curricular, cultural programs, tours, and visits, conferences to develop interpersonal skill, decision making and values clarification. Free distribution of motivational books to school students. Institute arranges spiritual lectures on different idolized thoughts. Distribution of sapings, ecofriendly ganessha idols, taking classes in near by school children, distribution of free props to physically challenged persons like tricycles, artificial limbs, blind walking sticks, hearing aids
5	**Evidence of success**	By organizing blood donation camp, MEDICAL CAMPS tree plantation, save girl rally etc., community activity is promoted in the neighbourhood of the institution. NSS activities also give the social ethical awareness among students. Stress management lectures will be helpful to students and staff for relieving stress and maintain peace
6	**Problems Encountered and Resources Required**	Going to the villages and convinced them that the institute is working for their betterment is a herculean task. More budget provision needs to be made for carrying out social work
7	**Notes (Optional)**	Environmental Science, Green Engineering Systems, Energy Audit Conservation and Management, Air pollution and control, Professional Ethics and Human Values, IPR & Patents, Professional Ethics & Morals-I & II education is already exists in the curriculum which is framed by the University to create

		awareness on environmental issues

Best Practice 3:

1	Title of the Practice	**Implementation of Faculty Course Assessment Report**
2	**Goal**	• The **FCAR** is an effective reporting tool that is used to collect all relevant course related information into a single document • An effective documentation tool for the purpose of both course learning outcomes (CLO) and student outcomes (SO) • Continuous improvement at the course level.
3	**The Context**	This process begins with the development of Course Objectives and Course Outcomes. Course Objectives are general statements about the content of the course. Course Outcomes are statements relating to what the students should know at the end of the course. At the completion of the course, each instructor completes an assessment report for each Engineering course they taught. The report includes the following sections; Heading, Catalog Description, Grade Distribution, Modifications Made to Course, Course Outcomes Assessment, Student Feedback, Reflection, Proposed Actions for Course Improvement. Other sections may be included as each instructor or the Department wishes. These extra sections may be used to assess the "soft" skills required by ABET(Accreditation Board for Engineering and Technology) such as written and oral communications, engineering ethics, etc. and should reflect your institution's Program Outcomes and Objectives. The Course Outcomes Assessment is the main section of the report and should include a quantitative evaluation of each stated course outcome. These evaluations should include examples of how the outcome was taught and evaluated. Finally, the extent to which the class satisfied the outcome should be stated numerically
4	**The Practice**	**1. Header** – FCAR consists of both the subject code and course number, followed by course title. Each faculty should submit an FCAR that summarizes the assessment of all sections for which he/she is responsible. Indicate the section(s) within parentheses that the Report is covering. Also provide the academic term and the Instructor's name for the reporting period. **2. Current Catalog Description** – Give the exact catalog description under which this course was taught. Providing this information will, over time, document changes made to the catalog description and why it was changed, indicating the feedback elements of the assessment process which led to the change. The FCAR documents this activity (change) in the

"Course Modifications" section.

3. Grade Distribution – List the distribution of grades for the course, including withdrawals. By actively engaging in this computation, the instructor can better reflect upon the results.

4. Improvements/Modifications Made to Course – This section mentions the course improvements made based on recommendations coming from previous assessments. Please list any substantive changes made to the current offering of the course, and cite the source of the improvement (e.g. a previous FCAR, an action plan, minutes of a committee meeting, etc.), especially if it has been documented. These references are necessary so that each modification can be traced back to its source and to demonstrate how the loop was closed for any particular modification. When the continuous quality improvement process is working, changes are fed back into the program, which is often referred to as "closing the loop" on the assessment process.

5. Course Learning Outcomes (CLOs)/Assessment Tools – List and address course learning outcomes (from Course Syllabus) separately. Appropriate documentation stating what items are used for the assessment. There is no need to assess every question on every assignment; keep your workload manageable by picking an appropriate selection of items (e.g. specific exam questions, noteworthy assignments) and use those for your assessment.

6. Student Outcomes (SOs) Assessment ("by Components") – Start by pasting here a copy of the applicable (a-d) Student Outcomes (SOs) for the course (right from the Course Syllabus). The assessment of course outcomes is, by itself, insufficient to meet the student outcomes and assessment. The data presented for satisfying the requirements for Criteria have to be relative to the adopted (a-d) Student Outcomes (SOs). This section of the Report is organized into "components" that roughly correspond to the individual items listed.

7. Student Feedback – When performing assessment, input should be obtained from all of the appropriate constituents; accordingly, student feedback is of utmost importance. Please provide a synopsis of the course evaluation form student feedback as it relates to the course. While some of the comments received from students are of dubious quality, or are of constructive criticism toward the instructor, there are other comments regarding course content and organization that are worthy of being shared. Sharing this information increases the likelihood that these comments will find their way into an action plan for improving the content of the course.

8. Reflection – The primary purpose of this section is to promote self-awareness on the part of the instructor. It is imperative to keep an open mind while looking at the results so that shortcomings can be identified and corrected. This allows for documenting impressions regarding the effectiveness of

		instruction, extenuating circumstances that might have affected student performance or items that fall outside the scope of the current set of course and student outcomes. It also allows for the documentation of those things that are not easily measurable and of things that are measurable but not encapsulated into the current set of course or student outcomes. **9. Proposed Actions for Course Improvement** – The specification of proposed actions for course improvement begins the "closing the loop" process, as these items constitute the result of the instructor's evaluation of the course via assessment, student feedback, and reflection. There are no restrictions as to what can be proposed; it could be as simple as a note to include material on a certain subject in an assignment, or a recommendation to the curriculum committee to modify or create a course to better deal with some of the subject material. Whatever suggestions are recorded by the instructor, it is essential that the appropriate parties incorporate the FCAR review into the overall assessment process as a regularly scheduled activity.
5	**Evidence of success**	The use of FCARs has facilitated the process of ABET(Accreditation Board for Engineering and Technology) assessment by providing quantitative measures (Course Outcomes) that may be directly related to Engineering Program Outcomes. The ability to track changes in courses over time as a result of the assessment of Course Outcomes allows the program to "close the loop" and provides the opportunity for continuous improvement. However, as noted by the ABET evaluators, every course and every instructor must participate for the FCARs to be valid. In addition, a consistent format for the quantitative measures is mandatory to allow the Course Outcomes to be mapped to the Program Outcomes. Over the period of three years, the majority of the faculty have become acclimated to the process and value its worth. The ability to track changes made to specific courses, and hence the program as a whole, has been found to be the greatest benefit.
6	**Problems Encountered and Resources Required**	

Best Practice 4:

1	**Title of the Practice**	Integrating ICT in Teaching Learning Process for better Academic Standards
2	**Goal**	Broadly ICT tools help to open up opportunities for learning by enabling four major key processes in transforming teaching and learning as follows: **Access** ideas and information from diverse sources through searching, locating, selecting, and authenticating material in a

		wide range of multimedia forms;
		Extend ideas and information through processing, manipulating, analyzing & publishing material in different multimedia forms;
		Transform ideas and information into new or different forms through synthesizing, modeling, simulating and creating material in many multimedia styles and formats; and
		Share ideas and information across local, national and international networks by interacting electronically with others in actual and/or delayed time. Access, extend, transform and share represent key processes by which students learn and become independent learners and self-starters. Through the processes learners express their creativity and imagination. These processes can be applied in all areas of learning
3	**The Context**	During the last three decades, the changes in educational environment have been phenomenal. The model, focus, role of the learner and technology has been changed drastically from traditional instruction to virtual learning environment. Shifting the emphasis from teaching to learning can create a more interactive and engaging learning environment for teachers and learners. This new environment also involves a change in roles of both teachers and learners. The role of the teachers will change from knowledge transmitter to that of facilitator, knowledge navigator and sometime as co-learner. The new role of teachers demands a new way of thinking and understanding of the new vision of learning process. Learners will have more responsibilities of their own learning as they seek out, find, synthesize, and share their knowledge with others. ICT provides powerful tools to support the shift from teacher centred to learner centred paradigm and new roles of teacher, learner, curricula and new media.
4	**The Practice**	Typically, teaching is undertaken in class-room and students practice on problems and go through experiential learning phase when they are out of classroom. Flipped class-room practice involves assigning study material, typically in the form of a video or detailed reading material, a few days ahead of the class. Thus, the student comes to the class equipped with the necessary knowledge and gainfully engages in experiential learning by solving problems. Several interventions may be offered by the teacher during this process such as: (i) helping the student recall fundamental knowledge, (ii) providing easiest line of though for complex problems, (iii) show parallel examples to encourage inductive learning, and (iv)provide tips and tricks that the teacher accrued over a period of time. Since this learning is occurring in the presence of the teacher, it is guaranteed to be complete. In SITAMS more than 80 % faculties are using ICT tools to make

		teaching effective. The Institute encourages all faculty to get certification from NPTEL for their specialized courses.
5	**Evidence of success**	The integration of ICT with teaching and learning has produced some of the significant positive gains in learners' knowledge, skills and attitudes by providing the following key advantages: Explore and represent information dynamically and in many forms Become more confident Increase motivation Communicate effectively about complex processes Develop better understanding and broader view of processes and systems Better understanding of the subject, Greater problem solving and critical thinking skills. Faculty and students are certified by NPTEL
6	**Problems Encountered and Resources Required**	Mind set of students is the biggest problem arised. Through counselling and personal attention the problems has been resolved.

Best Practice 5

1	**Title of the Practice**	Academic Preview and Academic Review
2	**Goal**	**Academic Preview:** • To assess the academic preparedness of faculty for effective curriculum delivery. (Plan) • To verify and validate components of Academic Administration Plan (AAP), and ensure its completeness by a panel of experts. (Check) **Academic Review:** • To verify the Course Files compiled by faculty members for their respective courses. (Do & Check) To assess the proper implementation of AAP, to suggest remedial actions and corrective measures if any. (Check & Act) **Underlying principle of this practice:** • Preparation is the key to success (Academic Preview); feedback is the key to continuous improvement (Academic Review).
3	**The Context**	Academic planning and preparation is meticulously monitored (Academic Preview) and its efficiency is checked and quantified in a well-defined process (Academic Review). Academic Preview and Review are uniquely designed to meet the Institute's requirements to ensure quality education. Development of systematic mechanism for compliance is achieved through the Preview/ Review Processes
4	**The Practice**	MHRD, AICTE, and UGC focus on quality education in higher educational institutes through faculty development and

curriculum enrichment. SITAM also believes in this philosophy and has therefore initiated.Academic Preview and Review Processes in 2017-18 to help set benchmarks for quality technical education and to streamline curriculum delivery.SITAM's Preview and Review Processes are strategically designed in terms of planning, implementation and their continuous improvement. Academic Preview of every faculty member is conducted before a semesterbegins and Review at the end of the semester.

Academic Preview:

As "Well begun is half done", SITAM has introduced Academic Preview which contributes to meticulous planning and use of appropriate academic resources for effective course delivery. It is carried out in three stages:

Stage 1: Faculty prepares draft AAP with inputs from Cluster Mentor/s (Internal and External). The Cluster Mentor scrutinizes the AAP and strengthens as required.

Stage 2: Faculty then submits information in the standardized self-evaluated Preview form as per the activities proposed in AAP to the HOD.

Stage 3: HOD along with DAO verifies and validates the academic preparedness. the final approval, AAP is disseminated to students.

Academic Review:

Academic Review is an evaluation of the implementation of AAP. Faculty appears for the Review process with respective Course File that contains well-documented proofs of all predefined items along with dulyfilled in Staff Diary and Course Diary. It is carried out in three stages:

Stage 1: Faculty submits standardized self-evaluated Review form to HOD. HOD and DAO validate the information at the Department level and the same is forwarded to the Institute Panel.

Stage 2: The Institute Panel (comprising Director/Principal/ Advisor/IQAC Coordinator along with there spective Head) verifies the contents in the Review Form, Course File including Staff Diary and Course Diary based on guidelines.

Stage 3: Report along with the grades is submitted to the Principal and feedback is communicated to the faculty.

Uniqueness:

Development of a comprehensive AAP. Systematic mechanism for pre-teaching (planning) and post-teaching (evaluation) compliance through the ever evolving SMARTER (S=Specific, M=Measurable, A=Attainable, R= Relevant,T=Time bound, E=Evaluated and R=Reviewed) Academic Preview/Review Processes.

5	**Evidence of success**	Academic Preview and Review are successful endeavours at SITAM and lead to curriculum enrichment.Implementation of Preview and Review processes has brought in significant positive changes in performance in the following areas: • Development of comprehensive AAP including BSA activities • Innovative teaching learning styles • Development of E-learning resources • Adherence to academic calendar and AAP • Proper documentation retrieval through Course Files
6	**Problems Encountered and Resources Required**	**Challenging issues:** Designing and developing of Academic Preview and Review process –identifying parameters,assigning weightages and deciding the marking scheme. Designing the AAP template after incorporating recommendations by Cluster Mentors, in addition to the University norms. Preparation of Course File comprising 32 predefined items including Course Diary and Staff Diary and relevant evidences which requires meticulous documentation skills. Creating awareness of the significance of the Preview/Review Processes, and orienting faculty towards the same. **Constraints/limitations faced in designing and implementing:** • Moving from paper to paperless • Logistics of organizing Preview/Review processes for all faculty • Time constraint in implementing AAP activities (e.g. availability of industry expert on weekdays for guest lectures) • As with any new initiative, there were a few problems encountered during implementation the Academic • Preview and Review processes: • Increasing awareness among faculty regarding: • Innovative teaching-learning methodologies such as crosswords/mobile based exams/plickers etc. • Online courses (MOOCs) • Mechanism for preparing e-books (digital content) • Open book test/Take home test/Online quizzes etc. • Time allocation for implementing the practice • Understanding the mindset of the current generation and designing a suitable TLP to suit their learning needs. • Orienting teachers to adopt innovative teaching methods. However, with time, efforts are in place to overcome these problems through discussion and analysis. SITAM is equipped with all the resources and infrastructure required for the implementation of the Academic Preview and Academic Review processes, which is now a well-established practice at the

		Institute