A NAAC Accredited Institution
KINGS
COLLEGE OF ENGINEERING
Recognized under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai

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7.2.1 TWO BEST PRACTICES SUCCESSFULLY

IMPLEMENTED BY THE INSTITUTION

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KCE - BEST PRACTICE I

Title of the Practice

Systematic approaches to strengthen Industry-Academia Interactions gaining wider exposure and knowledge among student and faculty members.

Goal

Institute takes various initiatives to promote closer interactions with industries and to establish linkages with Industries. An academia-Industry interaction is need of the hour. KCE has set a practice of mandatory visit to industries by both students and faculty members. It provides a platform to know about industry practices and expectations. Students visit industries during vacation period under In-House Training (IHT) scheme and Faculty members visit Industries under Faculty-Visit-To-Factory Scheme. With the objective of developing and refining skills, network with professionals in the field and gain valuable industrial experience, students are encouraged for internships.

The Context

Being rural located institution with diverse group of students varying in potential and committed to provide better career opportunities, various efforts are taken towards student progression. Around 45-50% of students belong to First Graduate (FG) category. With a commitment to raise the student skills and enhance their career opportunities, regular interactions with industries are initiated by inviting the Industry personnel's for various technical events. Through FVFS, faculty enrich their knowledge and motivate the students to enhance their skills. To overcome the listed challenges and to attain the objective, efforts are taken towards improving industrial interactions. Periodical reviews on Industrial/Experiential learning are examined in staff council meeting.

- *Rural locate* of the institute and access to industries located at cities is strenuous.
- Gap between *Curriculum & Industry expectations* and *student* potential is very wide.
- *Educational system focuses* on marks based evaluation.
- *Scope for Industry-Academia interaction* is very less due to **governing policies & rules.**
- *Global economy changes* resulting in less demand at Industries.

The Practice

- **Staff interaction with Industries**
    - *Faculty-Visit-To-Factory (FVFS):* To expose faculty members with industrial practices and expectations by means of "Training to the Trainer", FVFS scheme is practiced. Faculty members visit various industries to acquire practical knowledge and upgrade to the recent trends adopted in the industries. Faculty members disseminate the knowledge gained during their visits and by appropriate mapping to course topics or content beyond syllabus component. FVFS schemes paves way for interactions with industrial personnel thereby linkages for academic support is established. Due to lockdown, FVFS in this period is achieved by online interactions with Industrialists.

- **Student interaction with Industries**

    Internship, In-Plant training (IPT), Industrial Visits (IV): Industrial visits are important for student undergoing professional degree. IHT, IV and Internship are made mandatory to give insight into industrial environment. Some students have undergone online internships during this period, due to this pandemic situation.

    - With an aim to go beyond academics, industrial visit provides students a practical perspective on the world of work. By these visits internal operations of the industries are exposed to students. Students are able to identify prospective areas of work at industries.
    - To inculcate domain specific industrial experience, all pre-final year students are encouraged to undergo training for a period of 3-5 days under IHT scheme. Innovative Project works are initiated by the students through these visits. After the visit, students will share their experience during presentation session.
    - Batch wise all round performer from every branch is sponsored for industrial visit abroad. A unique practice of the institution encourages advanced learner to be competent and triggers overall initiatives among the members.

Evidence of Success

- Student placement record, Industrial interactions are in increasing trend.
- Various technical training programmes were organized by inviting the industrial experts.

- Technical Training sessions, Employability enhancement programmes, Project expo are organized inviting industrial experts. Online tests are conducted for final year students in association with industrial linkages.
- Custom designed skill oriented courses like refresher course, GATE coaching are organized for II year and III year students. For final year students **"My Credit Course-MCC"** is offered as a part of skill oriented course. MCC course is aimed at enhancing the employability opportunities of the students. During this pandemic period, since the industry interactions got affected, Identified SWAYAM courses by the department were conducted as MCC for all the students.

1.1 Category wise Industrial sectors in regular interaction

Category	No. of Companies
Production & Manufacturing sectors	21
Service sectors	22
Communication sectors	01
IT sectors	04
Training sectors	01
Total	**49**

1.2 Faculty-Visit-To-Factory Scheme summary

DEPT.	Year wise No. of Industries visited					
	2021	**2020**	**2019**	**2018**	**2017**	**2016**
Civil	15	15	09	11	15	11
CSE	13	13	13	10	11	10
ECE	17	17	18	11	15	14
EEE	10	10	11	06	11	11
Mech	10	10	20	08	14	13
S & H	16	17	18	19	20	21
Total	**81**	**82**	**91**	**65**	**86**	**80**

1.3 Branchwise In-House Training (IHT) Internship & Field Visit (FV) (2020-21)

Branch	IHT/Internship	No. of Companies visited	Field Visit
CIVIL	18	04	28
CSE	84	16	43
ECE	44	10	42
EEE	10	2	15
MECH	121	17	-

1.4 SWAYAM Execution Summary

S.No	Name of the Department	2018-2019		2019-2020		2020-2021	
		Students count	Staff Count	Students count	Staff Count	Students count	Staff Count
1.	CIVIL	42	11	122	18	172	29
2.	CSE	13	3	23	-	198	19
3.	ECE	05	16	104	30	244	39
4.	EEE	-	-	-	-	54	12
5.	MECH	-	-	87	11	252	19
6.	S&H	-	-	-	-	38	6
	TOTAL	60	30	336	59	958	124

1.5 NPTEL Session Execution Summary

S.No	Name of the Department	2020-2021	2019-2020	2018-2019	2017-2018
		No.of Courses	No.of Courses	No.of Courses	No.of Courses
1.	CIVIL	31	34	42	54
2.	CSE	32	32	30	16
3.	ECE	32	34	43	56
4.	EEE	31	32	33	32
5.	MECH	38	46	47	66
6.	S&H	60	60	66	-
	TOTAL	224	238	261	224

Problems encountered and resources required

- Establishing linkages with Industries to support In-House Training initiatives.

BEST PRACTICE II

Title of the Practice

Systematic approaches towards student and staff skill enrichment & accomplishments supporting overall progression

Goal

- To motivate students and support them in overall grooming thereby become competent to face the world with confidence.
- To encourage staff members opportunities for career progression and professional accomplishments.
- To provide opportunities for various value addition initiatives and support services.

The Context

A structured practice adopted at the institute incorporates activities to extend students education beyond their curriculum. With a commitment to provide opportunities for broadening their educational experience, activities are organized throughout various stages of their programme. These activities are designed to cater the demands of the employers and higher education providers. Programmes helps in attainment of student skills & knowledge, fostering a sense of confidence.

The Practice

Student potentials are identified at various stages. Year wise, various opportunities are provided to the students fostering towards overall grooming. Course plan structure incorporating assignments & content beyond syllabus component for all courses, Mini-Project works, Refresher courses with suitable industrial expert involvement imparts industrial exposure to students in a systematic manner. Students were motivated and enriched through various opportunities created internally through value addition initiatives and encouraged to attend external programmes. Academic calendar includes slots for these activities. Action plan for these events are submitted during semester commencement and review is made on the progression. Value Added Courses aim to provide additional learner centric graded skill oriented technical training, with the primary objective of improving the employability skills of engineering students. The primary objectives are,

- To provide an opportunity to students to develop inter-disciplinary skills.
- To bridge the skill gaps and make students industry ready.
- To provide a course in order to equip themselves to enhance their curriculum.

University recommends and offers credit to Value added course for students studying under regulation 2017. Institute has offered custom designed Value added course department wise, credited in mark statements. Anna University has approved 5 courses that are custom designed. Staff members are encouraged for enrichment towards raising quality.

Evidence of Success

1. Regular time-table incorporates the skill enhancement practices Project work, GATE & Competitive exam coaching, T&P training and SWAYAM.   Student Change Club meet is conducted regularly as per day order of the department. Professional society activities are conducted as per action plan semester wise. Student feedback for these practices shows the effectiveness of the activities.

2. **Placement track record** of our institution is highly appreciable**:** 75 % of our 2021 batch students have been selected and placement offers were committed to these students. We are happy in creating opportunities for our final year students every year among the best industry players.

3. **Best Department award** credits the accomplishments & activities of the department staff and students. Departments submit overall report of the department. Evaluation committee examines and identifies the best performer of the year. Department with highest score is awarded as Best Department during the Annual Day Celebrations. This practice instils a spirit of competition and triggers best accomplishments resulting in overall progression.

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2.1 Anna University Approved Custom designed Value Added Courses

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Value added courses	Number of students enrolled
CIVIL - CVA001 Construction technology	**27**
CSE - IVA005 VB.Net	**44**
ECE - IVA019 Real Time Electronic System Design	**39**
EEE - EVA002 Advances In Solar Energy Technologies	**15**
MECH – MVA010 (Energy resources & management)	**44**

2.2 Academic enrichment initiatives organized for students
(Internal Programmes)

Programme organized	2020-21	2019-20	2018-19	2017-18
Orientation Programme	17	12	7	7
Bridge course	7	4	13	6
Guest Lecture sessions	14	16	16	15
Refresher course	4	4	2	4
Workshop	11	13	19	19
Seminar	29	25	6	7
Symposium	5	5	5	5
National Conference	5	3	6	5
Spoken Tutorial workshops	30	19	19	17
Alumni Interaction Sessions	20	15	21	8
Professional Society Activities	15	16	23	10
My Credit Course (MCC)/SWAYAM	958	234	475	364
Intra Department Paper Presentation	3	6	8	7
Mini-Project Expo	1	6	3	2
Project Expo	5	5	5	5

2.3 Programme attended by the students
(External Programmes)

Programme	2020-21	2019-20	2018-19	2017-18
Workshop	372	193	253	140
Seminar/Webinar	1052	355	19	10
Paper presentation (Symposium)	103	27	44	50
Technical events (Symposium)	49	39	35	42
National Conference – Paper Publication	145	66	200	143
International Conference – Paper publication	61	45	112	38
Journal publication	43	11	142	3
Project contest	64	75	2	7

2.4 Staff enrichment & accomplishments

DESCRIPTION	2020-21	2019-20	2018-19	2017-18
FDP	194	83	39	4
STTP	57	65	27	2
Workshop	52	244	73	44
Webinar/Seminar	652	1803	20	9
SWAYAM/NPTEL Course	124	59	30	28
NITTR FDP	65	126	97	-
ATAL FDP	60	-	-	-
Conference Publications	79	61	142	68
Journal Publications	38	14	48	67
Proposals Submitted	16	38	22	24

Problems encountered and resources required

Due to pandemic situation, Scheduled programmes and activities for the odd semester were executed through online mode.