Best Practice 1

1. **Title**

Encouraging faculty enhance knowledge through SWAYAM-NPTEL / online courses

2. **Objectives**

The institute main goal to increase the number of faculties enrolling online courses. The faculty will get full registration fee on competition of the course. NPTEL collaborates with industry to create courses that will assist everyone in gaining relevant knowledge and developing relevant skills in their field.

- To encourage faculty to enhance advance technological knowledge through NPTEL/online courses.
- To impart life skills, develop the personality and communication skills.
- To facilitate incorporation of reading materials and videos to balance classroom teaching.
- To educate and raise awareness among the faculty.
- The institute major goal is to increase the number of faculties enrolling online courses.

3. **The context**

In the present scenario, there is a dire need of well qualified and skilled employees to perform the tasks. There is a need to enhance the subject knowledge of faculty to deliver the content effectively to students. The faculty members had the choice to select the course of their own interest, either related to their course or in new domain.

NPTEL offers open online courses along with certification in various engineering disciplines, sciences, humanities, management and research which provide appropriate experience to tools and technologies. This ease flexibility for the faculty to prioritize the time and work at one's own pace. AICTE recognizes advanced level NPTEL courses as FDPs for engineering colleges due to inadequate opportunities available for faculty to attend face-to-face fulltime training programs.

4. **The practice**

ACET Local chapter started in the year 2015.The faculty members and the students are encouraged to do online courses. NPTEL collaborates with industry to create courses that will assist everyone in gaining relevant knowledge and developing relevant skills in their field. Because there is such a large gap between education pattern and industry requirements. Successful faculty get course certification certificate. Based on merit faculty receive Elite, Silver, Gold and Elite+ Gold Elite+Gold+2%which increases the passion of the faculties to join up for next courses that helps the growth of the college.

One faculty member is nominated as NPTEL course coordinator. All information regarding new courses and registration will be maintained by the coordinator.

5. Evidence of Success

The number of faculty registration and course completion is increasing year by year.

Table1 gives information regarding the academic year with the faculties completed and registered the courses.

Table 1: Swayam-NPTEL data

S.No	Academic Year	faculty qualified
01	2019-20	55
02	2018-19	234
03	2017-18	47
04	2016-17	02

Most of the faculties secured Elite, Elite+Silver, Elite+Gold certifications table 2 gives the information.

S.No	Academic Year	Elite Certification	Elite+Silver	Elite+Gold	Elite+Silver +top5%	Elite+ Silver+Top 2%
01	2019-20	12	09	01	01	01
02	2018-19	84	45	14	06	5
03	2017-18	12	9	1	1	--
04	2016-17	01	--	--	--	--

6. Problems Encountered and resources:

- The NPTEL courses are offered from July to October and January to April every year and academic year starts from June to December and January to April.
- Faculty will face hectic work load because NPTEL and academic calendar starts at a time.
- Our faculty had delivered good academic results and NPTEL results also.

Best Practice 2

- **Title**

Go Green

- **Objectives**
  - Tree plantation.
  - Use of renewable energy.
  - Maintaining biodiversity.
  - Energy optimization for enhancing energy utilization.
  - Creating awareness to students on environment.
  - Carbon neutrality and reducing fossil fuels that affect environment.
  - To involve students in safeguarding the environment.
- **The Context:**
  ACET College campus extends as a lush green and extensive oxygen rich and echo friendly place of quality learning at Surampalem. Globally change in climate and reduce of water levels are the most pressing issues. These issues are will determine the progress of future generations. Constant steps to be taken continuously to conserve and preserve our environment. Awareness and importance to be created in students. The contribution of students in programmes will help us to preserve the environment.ACET had been pioneer in adopting required initiatives to infuse the spirit of environment awareness among students and faculty. By inserting environmental awareness in students that helps for the development of the society. The Eco friendly campus will give message to the students that protecting nature is protecting human kind.Continous green practices are followed then the life can be enhanced.
- **The Practice:**
  The following inventiveness has been taken in the college to give to the noble reason of consciousness of environment and its sustainability.

Plastic Ban in the campus:

The main goal of the programme is decrease plastic pollution in the college. The main focus on reducing and eliminating plastic bottles, straws and food packaging. Students and faculty are advised to drink RO purified water in the college rather than water bottles. The faculty and advised to bring copper/steel bottles replacing plastic water bottles.

Waste management:

Aditya College of Engineering & Technology has devised a method for managing waste created in the campus reuse, reduce and recycle are the basic strategy employed. Solid and liquid waste generated by college is biodegradable and non-biodegradable in nature. Hazardous waste is not generated in the campus

Energy conservation:

- Awareness is created among the students and faculty.
- Display boards are placed at every floor, staff room and class rooms.
- The solid waste is utilized for vermicomposting.
- Recycling of waste water and using it for gardening helps to reduce consumption of water.
- Water conservation facilities are deployed across the campus to harvest rain water, monitor water levels in tanks and recycle the waste water
- Energy efficient equipment like LED bulbs are in application to reduce the consumption of electric power.
- Bicycles are allowed as a means to commute inside the campus for the staffs, students and visitors.
- E-vehicles are used for internal transport for visitors and parents.
- Every year tree plantation drive is conducted by Eco clubs and NSS in and outside of the campus.

Use of Renewable energy:

- Aditya college of Engineering & Technology have installed solar power generation plant in the year 2018.
- The plant produces 500kW power to meet college needs and additional power is send to Andhra Pradesh State Electricity Board (APSEB).
- It has significantly reduced the requirement of regular electricity supply.
- Awareness programmes are being organized frequently on generation and conservation of energy obtained from various sources.

Carbon neutrality:

- Well established and well maintained gardens in the campus.
- Greening of college campus to reduce the carbon foot print.
- Printing is done both sides of the paper
- Uses of plastic utensils are discouraged.
- E-vehicles are used for internal transport.
- Staffs are encouraged to travel by college staff bus.
- Notices and circulars are sent through E-mail.

5. **Evidence of Success:**

- ACET campus consists of wide variety of Ayurvedic, Tress, Flower and design plants.
- Nearly 500 plants of ayurvedic, 1000 varieties of flower plants, 1400 varieties of trees and 1500 design plants and trees are available.
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- The institute is wheeling the power generated from the rooftop solar panels to the distribution to the grid. The units shared with the grid are reduced from the actual consumption of power supply.
- The electricity bill is reduced every year from the date of installation.
- ACET-NSS unit was awarded Best service for the poor and needy.
- ACET Eco-club - Eco corps held a "Clay Idols- Go Eco Friendly" program to commemorate the Vinayaka chavithi. The clay Ganesh idols were made by Eco Corps and other faculty members and handed to the faculty.
- Every year plantation of saplings in the campus and nearby village is conducted by the college NSS.
- A recharge pit harvested the rainwater coming from the top roof of the Visveswaraya building. Similarly, a rectangular water pit has dimensions length of 29 ft, and a width of 9 ft.
- The wastewater from the drinking water points is directly drained through the waste pipe connected to the inner garden area, and the wastewater from the R.O. plant is utilized for the outer garden area. Approximately 1, 12,000litres per day of R.O. reject water was sent to the large exterior garden with more mango trees.
- There are two tanks (open ponds) on campus where the rainwater from various parts of the campus is collected and stored. Rainwater from building rooftops is also channeled into these open ponds. Aerators present in ponds maintain suitable dissolved oxygen for the purpose of aquatic life.
- The capacity of the overhead tanks at Visveswaraya block and C.V.Raman block are 90,000 liters and 45,000 litres, respectively.
- Only reverse osmosis water is available for drinking on campus; we have three R.O. units, each with a treatment capacity of 2000 litres per hour. Activities conducted under go green is listed in table1,Data wheeling to grid is given in table 2 and varieties of trees & plants are given in table 3.

Table 1: Activities conducted under Go-Green

Academic Year	Name of the Program & Date	No of participants	Location
2016-17	Plantation of Saplings 13-08-2016	45	Nayakampalli panchayat
2017-18	Plantation of saplings 27-01-2018	45	Aanuru panchayat
2018-19	SWACHHTA PAKHWADA- 1-8-2018 to 15-08-2018	673	P.Nayakampalli panchayat
2019-20	Plantation of saplings 09-09-2019	45	Aanuru panhcayat.

Table 2: Data to wheeling to grid

Month	Total consumption (KVAH)	KVA Share (KVA units)	Total consumption	Billed Unit
May 2018	77454	4953	72501	72501
June 2018	59304	35334	23970	23970
July 2018	77493	16926	60567	60567
May 2019	68484	19722	48762	48762
June 2019	69373	10303.5	59069.5	59071
July 2019	65607	6727	58880	58880
May 2020	18508	45537	-27029	6000*

*If the net consumption is below 6000 units, then 6000 units will be for that month

Table 3: Data of various plants and trees

Type of Tree	Plant or Tree names
Design	Cypress, Redduranta, Budda bamboo,Cazirina,Green duratha, Golden duranta, Golden duranta,Pycus,Carpet lawn,Pisonia alba,Shampan palm, Phonix, Creepers, Pundulnus
Ayurveda	Tulasi,Agara,Turmeric,Duttura,Betelleaf,Bur flower
Flower Plants	Indian oleander, Singapore ixora, Almonf, Hibisuc, Rose, Mini ixora, Pilemria puttiki, Catharanthus rose, Edinium, Mini nandhivagana, Porchuluca Tube rose.
Trees	Arkeria,Royal palm, Foxtail palm, Mango,Neem,Red sandalwood,Teak,Traveller palm, Papaya, Areca palm.

6. Problems encountered and resources

➢ Lack of awareness among the students & Poor availability of eco friendly products

➢ Difficulties in implementing Water conservation projects.

➢ Lack of inherent willingness among students to obey environmental issues- counseling and proctoring students.