

Metric No.		Weightage
7.2.1 Q ₁ M	<p>Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.</p> <p>Provide web link to:</p> <ul style="list-style-type: none"> ● Best practices in the Institutional web site ● Any other relevant information 	30

Note:

BEST PRACTICE 1

1. Title of the Practice:

Community action learning program (CALP)

2. Objectives of the Practice

What are the objectives / intended outcomes of this “best practice” and what are the underlying principles or concepts of this practice (in about 100 words)?

The concept stems from a core belief that an institution is part of the larger community and everything students do should contribute to a social impact. In pursuance of the UN Sustainable Development Goals, the University proactively aligns all its activities with the achievement of the same.

Students are required to reach out to local communities and put into practice the knowledge and skills acquired in the classroom to solve day to day problems they face. This program additionally helps students to develop a sense of concern for community, negotiation through communication, strategic planning, team spirit, etc, thus ensuring the overall confidence.

2. The Context

What were the contextual features or challenging issues that needed to be addressed in designing and implementing this practice (in about 150 words)?

The contextual framework for this practice would require a deeper understanding of the communities within which the University is based and the student profile that the University attracts.

The University operates in some of the most difficult geographies (Prime Minister's aspirational districts, previously left wing extremist districts) with one of the most challenging clientele (some of the most disadvantaged demographics). These locations, with a varied range of development challenges, provide an ideal platform for this program.

A key challenge faced was, firstly, to integrate skills into the education system at different levels and secondly, that of taking a heterogeneous mix of students with varied beliefs, attitudes and interests and get them to work closely together in reaching out to the community and build sustainable relationships and interventions.

3. The Practice

Describe the practice and its uniqueness in the context of India higher education. What were the constraints/ limitations, if any, faced (in about 400 words)?

Context: The Indian education system is much maligned for its theoretical focus and lack of industry and real world connect. The obsession of parents and society at large with narrow career paths of engineering/ medical/ banking/ UPSC as being the only hope limits the students' world view. It then becomes the responsibility of the Higher Education Institutions to transform their intake of disinterested students based on curricula that does not equip them with real world skills needed to navigate the modern workplace.

The students have no context of the kind of jobs/ entrepreneurship opportunities that are available in the economy and simply associate rural jobs with farming and urban jobs with factories, banks, call centers or malls. The services sector contributes to over 55% of our economy and provides tremendous employment opportunities. This context is missing in education and the CALP is aimed at helping students build a world view which requires them to go beyond their curricula and identify real world problem solving and entrepreneurial opportunities.

The Practice

The students are required to reach out to local communities around the campus or go back to their hometowns/ villages to find a project that could qualify. The exercise builds a sense of pride in giving back to the community and helps

build softer skills in the students like confidence, communication skills, negotiation skills etc.

Sample of program design

1st Year students were only assigned a role of volunteers or observers. Students of 2nd, 3rd year can form interdisciplinary groups and take up Project designing, coordination and implementation. The group size may vary between 2 and 5 members. Each group was required to select a Team Leader and designated photographer/ videographer. The team had the autonomy to discuss and debate the final idea and prepare an action plan. A mentoring team consisting of experienced faculties provided support. The final submission included documents to capture their experience through posters/ presentations and videography. The final presentations were done in an exhibition mode at the end of the semester and all the projects were viewed by the CUTM senior management team.

Some of the examples were door-to-door home appliance maintenance and repair in the nearby communities; providing maps of homestead land through surveys; awareness generation on environmental cleanliness, personal hygiene and sanitation through the Adarsh gram (model village) project; working with farmers in rural areas on agricultural knowledge and practice; Waste to wealth.

4. Evidence of Success

Provide evidence of success such as performance against targets and benchmarks, review/results. What do these results indicate? Describe in about 200 words.

This program was initially rolled out on a pilot basis for the Polytechnic or Diploma Engineering students and there was plenty of evidence of success of the initiative through formal student feedback, community feedback and the photo/ video documentation done by the students.

The final submissions included:

- A poster for public presentation,
- A 2 minute video documentary
- Plan of action to scale up the idea
- Institutionalizing a Club or Society or Start-up venture
- Connect more people to the idea and help it grow

Certificates/ Appreciation:

Certificate of appreciation were awarded to all successfully implemented projects. Teams with Best Projects were awarded and supported further to upscale and supported to Apply for different fellowships (e.g.; Gandhi fellowships, Young India Fellowship, Azim Premji Fellowships) or academic programs. Best video documentaries were highlighted in the social media page of the University.

Some of the he student feedback received was: ‘Great to get out of the classroom and campus’, ‘interesting to see that simple things like water and electricity are so difficult here’, ‘fantastic learning’, ‘a new perspective’, ‘outstanding experience’. A sample community feedback was: ‘Free electrical appliance repair drive done by students was truly unexpected. Even the government does not do so much for us’.

6. Problems Encountered and Resources Required

Please identify the problems encountered and resources required to implement the practice (in about 150 words).

At the outset there was no budgetary provision for community engagement and travelling to the local community had costs associated with it. Projects undertaken also required resources, material etc. Since budgetary provision was not envisaged at the outset of the program, it almost became a non-starter. However, the students stepped up and decided to self-fund and crowd fund their initiatives which was very heartening to see.

Another challenge faced was from the parents who were uncomfortable with their wards, especially girls, travelling into unknown territory and communities. The security risk was of concern to the University as well and required planning, this was resolved by restructuring of the groups to ensure male/female mix, being initially accompanied by a mentor and ensuring that approval for field trips was taken in advance.

7. Notes (Optional)

Please add any other information that may be relevant for adopting/ implementing the Best Practice in other Institutions (in about 150 words).

Information regarding Institutional Values and Best Practices which the university would like to include.



BEST PRACTICE 2

1. Title of the Practice:

GO TO MARKET: New Product Development Process spanning Ideation, Design and Concept Development, Simulation and Testing, Prototype development, Market Assessment, Commercialization

2. Objectives of the Practice

What are the objectives / intended outcomes of this “best practice” and what are the underlying principles or concepts of this practice (in about 100 words)?

While technology is creating many unicorns and attracting talent, CUTM remains committed to ensuring that the manufacturing sector gets a steady stream of skilled engineers, diploma engineers, ITI graduates and skilled workers. GO (LAB) TO MARKET program is designed to equip students with necessary skills that span the product development process which was absent in the traditional theory-based curricula. This typically follows a 7 step process and can also be leveraged for the services sector and IT based products. Entrepreneurship is another core principle and students are encouraged to create businesses based on products or services with adequate training on the commercialization aspects of product development.

3. The Context

What were the contextual features or challenging issues that needed to be addressed in designing and implementing this practice (in about 150 words)?

The traditional departmental structures of Engineering education compartmentalizes the curriculum into rigid streams of mechanical, electrical, electronics, civil etc. In the real world, products developed require a multi-disciplinary approach and there is a particular lifecycle that product development follows which includes Design, simulation, testing, prototype development, market scan, commercialization.

The traditional curriculum does not address these issues and therefore the labs available are designed for the traditional curricular structure and equipped with traditional practices like smithy, workshop filing and only reductive

manufacturing. The modern industrial workplace engages precision CNC machines and 3D printers, high resolution scanners and requires functional knowledge of programming, logic controllers and mechatronics. Software are available to design, simulate and develop 3d twins of factories which reduce the cycle time of converting a concept into reality. The students entering the modern workplace need to be equipped with these skills along with an understanding of the commercialization aspects.

4. The Practice

Describe the practice and its uniqueness in the context of India higher education. What were the constraints / limitations, if any, faced (in about 400 words)?

A unique multidisciplinary multiple credit specialization has been introduced into the CUTM academic curricula called **GO TO MARKET**. This course spans one semester with an additional option for students to take the product into the market in the next semester. The course especially focuses on introducing students to technologies relevant to Industry 4.0 and is structurally broken up into the key steps of product development spanning Ideation, Design and Concept Development, Simulation and Testing, Prototype development, Market Assessment, Commercialization.

A partnership with Dassault Systems has been established which provides students with state of the art technology and 3D experience software which allows digital product development, validation, simulation, testing and prototype development, bill of materials and product costing. This also includes the following key elements :

- Innovative Digital Product Development from PPR- a Product itself or a Process or Resource
- End to end digital design, validated digitally, Prototyped digitally, manufactured digitally and launched digitally
- Use of 3D Experience Platform of Dassault Systemes -CATIA, SIMULIA, DELMIA, and ENOVIA
- Guided by industry experts to build a go to market in 100 days strategy for Market Assessment to Commercialise the product
- Linkage with ‘Gram Tarang Startup Odisha Incubation Center’ to hand hold the start-up/ entrepreneur and File IPR/ Patent

The end outcome for the student is to Learn, Experience and develop skill and competencies valued by Industry. The project itself is driven as at any Industry

- planning, presentation, communication, Team work and collaboration, risk and its mitigation, product progress and review etc.

Students completing the program were either given handholding for their startups or given internships with industry OEM- Automotive, Aero, Process Industry, Heavy Machinery and their Tier-1, Tier2 suppliers.

One of the major constraints/ limitations of the traditional educational institutions is the lack of a structured entrepreneurship development process. The **Center for Innovators and Entrepreneurs** is an Incubator established with the purpose of providing mentoring and incubating young minds and create a thriving entrepreneurial ecosystem in Centurion University and is a recognised Incubator under Startup Odisha Initiative of Government of Odisha, MSME Department. Having incubated 27 entities till now from within the CUTM ecosystem, 12 entities are already incorporated under Ministry of Corporate Affairs, 9 are under the process of getting registered and 6 entities are pre- incorporation stage. Major support provided are :

- Work Space support
- Mentoring support
- Technical Support
- Market linkages
- Managerial and Business support training
- Scale up Plan

5. Evidence of Success

Provide evidence of success such as performance against targets and benchmarks, review/results. What do these results indicate? Describe in about 200 words.

The evidence of success comes from the various initiatives/ units formally registered through the program

LIST OF STARTUPS INCUBATED WITH CIE CUTM-GTET	
Name of the Company	Idea/Innovation/Solutions/Products for Business
Centurion Fab	Metallic Utilities: Table, Chair, Almirah, Bed, Desk, Grill etc.
Centurion WoodWorks	Wooden products and modular accessories

Gram Tarang Garments	Uniforms, Customized Bag, T Shirts with Screen/ Embroidered Printing
Centurion Transformers	Manufacturing and repairing of electrical transformers of different power and size, Providing training to electrical students on transformer repairing and manufacturing. Providing consultancy services on manufacturing and maintenance of different types of transformers
Centurion MachTech	Production of aerospace and automobile components as per the industry requirement and specification. Training on manufacturing of aerospace and automobile components, Consultancy to different manufacturing units working through CNC machines.
Centurion Gram Sanjeevani	Provide low budget doctor consultation and medicine in the rural Odisha where there is no hospital in the nearby area. It will be done on CGS App and entirely online. Serves the patients and also supports rural entrepreneur incubation to the medicine kiosks.
Susmita Enterprises	Designer Sarees, Dress, T Shirts with Screen/ Embroidered Printing
Centurion Crafts	Handmade Paper, Writing Pad, Paper Crafts, Ceramic Pottery and utilities
Centurion Repairs	Repairing and Maintenance of Domestic and Industrial Machineries
Centurion Wonderwood	Processing of Waste wood piece with Resin to create products in different segments: Jewellery, Stationary, Tableware, Furniture etc
Centurion VR	To develop and market different apps/projects based on AR/VR , customize technical solutions to the clients as per requirement. Providing high level of training on AR/VR to advanced technical students and provide them employment opportunity/ entrepreneurship in this field. Providing consultancy services to various farms/techies to use and develop products using AR/VR platforms.
Centurion Pavers	Paver blocks of varied designs
Centurion Renewables	Installation and Maintenance of Solar operated equipment in western India. Training on solar panel installation and solar operated equipment. Consultancy on all types of renewable energy , specifically in solar.
Centurion Dairy	Milk, Curd, Paneer, Sweet curd, Ghee, Rabidi, Flavour Milk, Powdered Milk
Centurion Compost	Production and marketing of vermicompost in different parts of south Odisha. Training on preparation of compost and it's marketing to agricultural students and farmers. Providing consultancy services to different farms engaged in compost production and it's marketing.
Centurion Mush	Production and marketing of different types of mushrooms. Training on mushroom production and marketing to agricultural students and farmers. Providing consultancy to different farms working upon mushroom production.

Centurion Seeds	Processing of different types of seeds and paddy. Training to agricultural students and farmers on processing of different types of seeds and paddy. Consultancy to different farms on different types of seeds and paddy processing.
Centurion Green Feeds	Manufacturing and marketing of different types of fodder in the rural markets of Odisha. Providing training of fodder production and supply chain management in the animal husbandry sector. Providing specialised training to animal husbandry students of fodder production and supply. Providing consultancy services to different farms, working upon different animal farms.
Centurion 3D Imaginator	Production of 3D printers and marketing to customized users. Training on production and different uses of 3D printers to students. Consultancy to different farms on production and different uses of 3D printers.
SKYY RIDER AUTOMATIVE PVT LTD	Provides Online & Offline skill training majorly in manufacturing and automotive sectors
Skyy Rider Electric	Assembly and sales of E-rickshaw and other customised e vehicles
LIKHAN Ecowriting Pvt Ltd	Paper Pen and Pencils production from waste materials like paper and fabric
Sangam Designs LLP	Designer Sarees, Dress, T Shirts with Screen/ Embroidered Printing
Zola India	Art & Craft
Familin	Pharmacy Aggregator
Beverage Bees	IoT solution for beverage services
Kalinga Fresh	Agriculture

6. Problems Encountered and Resources Required

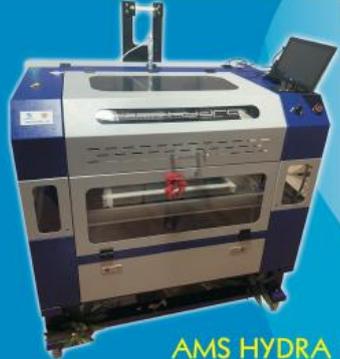
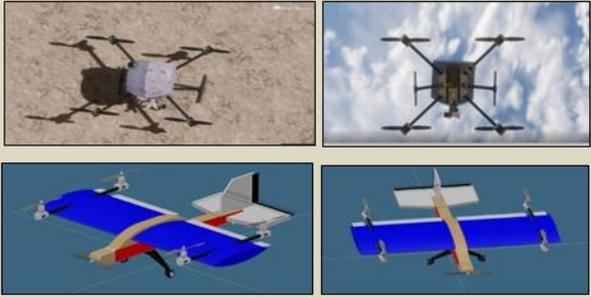
Please identify the problems encountered and resources required to implement the practice (in about 150 words).

The biggest challenge faced in the program design and implementation was in finding skilled faculty and trainers to deliver the training and handholding. This was overcome by bringing in key talent at a senior level from the industry and upskilling existing faculty by leveraging industry partnerships. Industry connect has been a key strength at Centurion University. Partners like Ashok Leyland, Dassault Systems, Café Coffee Day, Volvo Eicher, Schneider etc. have supported these programs especially for training of trainers and providing on the job learning exposure to both faculty and students. ToT programs have also been conducted in partnership with Sector Skill Councils of NSDC which has given exposure to the faculty to step up and deliver the GTM program. A second challenge has been to address the traditional mindsets of all stakeholders. Getting used cases from Industry and demonstrating through outcomes has been useful strategies in addressing this.

7. Notes (Optional)

Please add any other information that may be relevant for adopting/ implementing the Best Practice in other Institutions (in about 150 words).

Any other information regarding Institutional Values and Best Practices which the university would like to include.

	<h3>Incubation Space</h3> <p>for Startup Odisha </p>  <p>AMS HYDRA 16 A-S</p>
<h3>Design & Development of Electric Vehicle</h3> 	<h3>Drone for Surveillance & Agriculture</h3> 
<h3>Digital Twin of a Rice Mill</h3> 	<h3>3D Printer Machine</h3> 