VEMU INSTITUTE OF TECHNOLOGY

P.Kothakota, Chittoor District -517112

CRITERION 7.2

Best Practices

BEST PRACTICE - 1

Improving Employability through Skill development

BEST PRACTICE - 2

Fostering Innovative & Research Activities (FIRA)

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Best Practice 1

Improving Employability through Skill development

2

Best Practice -1

1. **Title of the Practice: Improving Employability through Skill development**

2. **Objectives of the Practice**

   The main objectives of the Skill Development programme are:
   - To provide adequate hands-on training to students in currently used industry tools and techniques
   - to create opportunities for the development of talent within the students and improve the overall scope and space for holistic development.
   - to facilitate the students to get placements in good companies preferably MNCs.

3. **The Context**

   As the demand for job-specific skills has been growing around the world, placement offering firms say that the quality and supply of skilled persons is a major requirement from the institutions. Employers are also demanding that new hires should have both technical and soft skills. With the right skills in the workforce, firms can be more productive and competitive. In view of this, in our VEMU IT, more weightage is given to develop the skills among the graduates and make them company ready once they enter in to the organizations.

4. **The Practice**
   - Conduction of career awareness and counseling programmes to help and support students to discover their interests, aptitudes and potentialities.
   - Maximizing the potentialities of students and boosting self-confidence in them by organizing more training sessions in technical and soft skills by the identified external agencies viz. Six Phrase, Talentio, COIGN, Rubicon etc.
   - Organizing training programmes in latest technologies that are in high demand and have good job prospects, through Andhra Pradesh State Skill Development Corporation (APSSDC) Skill development programmes.
   - ORELL- an interactive communication skill Software is being used to improve the communication skills of students.
   - CODETANTRA- an online interactive platform is being used to improve the technical skills of students.
   - Developing Technical Skills required for Placements through CodeTantra- an online interactive platform.
   - Organizing project competitions at department level to encourage innovative project ideas.
   - Additional experiments are being conducted in laboratories for more practical exposure of students.

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5. Evidence of Success

➤ Improvement in quality of companies hiring the students. The improvement in the quality of the companies that recruited our students could be observed from the below given list:

➤ **2018-2019: TCS, Mphasis, Infosys**, Colors Software, West Line Group, L-Cube Innovations, IDBI, ILM, Pathfront, Aliensgroup, Just Dial, Effive India Pvt Ltd, Global Data, Spandana Spoorthy, Verzeo, ICICI Prudential, Thinksynq, Tecnics, AGS

➤ **2019-2020: TCS, Cognizant, Wipro, HCL, Mindtree, Zenq, Fame Tronix** Glenwood Systems, Aliens Group, Ravands, Qspiders, ILM, Raam Group, Multiplier Solutions, Phytec, Toppr, Artech Infosystems, Byjus

➤ **2020-2021: TCS, Cognizant, Tech Mahindra, IBM, Capgemini, Mphasis, Wipro, Mindtree, Accenture, Infosys, DXC, Hexaware, Zen Technologies, Zenopsys,** Recordent, Glenwood Systems, Onegene Pvt Ltd, Covalense Digital, Eta Engineering Pvt Ltd, Perfectgears, Milekal Engg Pvt Ltd, Aryaan Solutions, Dr.Axion India Pvt Ltd, Global Edge Software, Fis India Private Ltd, Hyoseong, Geetham Software, CGI

➤ Improvement in number of placed students.
➤ Improvement in pay packages of placed students.
➤ More Mobile apps are developed by students addressing different needs.

6. Problems Encountered and Resources Required

When applied practically, a few gaps exist between the proposed methodology and practical implementation. As our Institute is affiliated to JNT University, we are bound to deliver the curriculum set by our affiliating university during the regular college hours. Despite best efforts by the University at developing a curriculum to bring out professional engineers, the skill requirements of the industry are continuously changing.

The time constraint was encountered to implement skill development programs in addition to the curriculum prescribed by the University. The regular college timings were not sufficient to deliver the skills required to meet the continuously changing industry requirements.

To overcome this, we procured CODE TANTRA, an online interactive platform to provide the sufficient hands-on training in technical skills. By using this we could able to facilitate the students to practice programming more beyond college hours and acquire the requisite technical skills for getting placements in good companies.

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Best Practice – 2

Fostering Innovative & Research Activities (FIRA)

Best Practice - 2

1. **Title of the Practice:** Fostering Research & Innovative Activities (FIRA)

2. **Objectives of the Practice**

    To improve the involvement of students & faculty in research & innovative activities and also Facilitate them to foster innovative ideas, inculcate competent research and consultancy skills.

3. **The Context**

    Incorporating a research component along with a sound academic foundation enables students to develop independent critical thinking skills along with oral and written communication skills. The research process impacts valuable learning objectives that help the students to prepare for professional service. Faculty members also can enhance learning experiences for students while benefiting from a productive research agenda. The college in turn benefits from presentations and publications that serve to increase visibility in the scientific community. Lack of student awareness, unequal student access, poor curricular timing, lack of publicity, and uneven access/incentives for faculty are the main set backs to develop the research orientation in faculty & students. To overcome the above and also to improve their involvement in research and innovative activities, VEMU IT started implementing many research & innovative activities

4. **The Practice**
    - ➤ R&D cell and Students Innovation Club working together to foster research and innovation activities in the college.
    - ➤ Organizing Seminars, Awareness Programs on IPR and innovation related aspects.
    - ➤ Conducting Idea Competitions and project exhibition cum competition as part of fostering innovative ideas.
    - ➤ Provision of Seed money to students to develop their idea proto types.
    - ➤ Patent filing is encouraged by faculty and students by paying registration amount for patent filing.
    - ➤ Entrepreneurship Development Cell in the college organized Entrepreneurship Awareness Camps, seminars on entrepreneurship development related concepts to encourage the students to become entrepreneurs.
    - ➤ Partnered (MOUs) with IP Ever Ltd. Chennai and Atal Incubation Centre – Sri Krishnadevaraya University (AIC-SKU), Ananthapuramu to nurture the students in the areas of innovation.

5. **Evidence of Success**
    - ➤ Two of our students started their own start-ups *(Annexure 1)*
    - ➤ Nine (9) patents were granted and another three (3) Patents were published *(Annexure 2)*

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- Two Student projects are selected for presentation in AIC-SKU federation and got published in Compendium *(Annexure 3)*
- Student projects are selected for state level presentation in AAVISHKAR conducted by BVM, APCOST & AICTE *(Annexure 4)*
- VEMU Institute of Technology is ranked in PERFORMER band by ARIIA 2021 rankings *(Annexure 5)*
- VEMU Institute of Technology is awarded as –Startup Ecosystem Enabler Award (Category- Emerging) for the year 2021 *(Annexure 6)*
- Improvement in quality of research publications.
- Improvement in students projects quality.

6. Problems Encountered and Resources Required

This practice requires committed teaching staff who have the desire to help students beyond teaching hours. There are no limitations or constraints faced during implementing the program.

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Annexure 1

- Two of our students started their own start-ups.
    1. Company Name: Clientoclarify AI Private Limited
       Students name: G. Yusuf, (Roll Number:154M1A0436), Founder & CEO
                              Syed Musthaq, (Roll Number:154M1A0358) Co-founder
       CIN Number: U72909AP2020PTC115141
       TAN No: VPNC02616F
    2. Company Name: Hemanth Production House
        Student name: Hemanth Kumar, (Roll Number:134M5A0201),Proprietor
       UAN Number: AP02D0006711
       GSTIN No: 37BWVPB1796E1
- Nine (9) patents were granted and another three (3) Patents were published.

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Annexure 2
List of patents

S.No.	Name of the Applicants	Title of the Patent	Patent No.	Publication Date	Date of Grant
1	Dr. Naveen Kilari	Design And Fabrication Of Mist Spray Through Vaporization Cooling System	201941025861A	12.07.2019	
2	Dr. Naveen Kilari	Design And Implementation Of Heat Exchange Equipment For Power Plant Application	201941025859A	02.08.2019	
3	Dr. A. Hemshekar	Electrical Tree Based HVAC Cable Insulation	201941029667	09.08.2019	
4	Dr. B. Saroja	IoT based counting and alert system for post pandemic safety	202041029561		
5	Dhanamjay Knipakam, P. Nirupama, Udaya Suriya rajkumar, P. Nageswara Rao	IoT enabled network for IoT devices to handle attack through deep learning approach	2020102634		11.11.2020
6	Dr. S. Munirathnam, Dr. G. Elaiyaraja, Dr. B. Saroja	Secure smart health care systems and analysis through wireless sensor networks	2020102632		11.11.2020
7	Dr. Naveen Kilari	Design of progressive Tools	2020102626		11.11.2020
8	Dr. D. Chandra Sekhar, Dr. A. Hema Sekhar, E. Kiran Kumar	A Novel method for electricity backup with super capacitor for television	2020102625		11.11.2020
9	Dr. S. Munirathnam, Dr. G. Elaiyaraja, Dr. S. Murali Mohan, Mrs. R. Rani	Underwater Wireless Optic Communication using single photon avalanche detector (SPAD) and Quadrature Amplitude	2020103198		23.12.2020

		Modulation (QAM)			
10	Dr. Udaya S. Suriya Raj Kumar, Mrs. P. Nirupama, Mr. K. Venkataramana, Mr. K. Dhanamjaya	Disaster Management Framework design using and IoT connectivity protocol and cloud	2020103199		23.12.2020
11	Dr. Naveen Kilari, Dr. KVNVN Rao, Ms. R. Rani, Ms. Y. Bhargavi, P. Bhaskar	Autonomous Navigation Guidance and Control based on Artificial Intelligence for the vehicular systems	2020103222		23.12.2020
12	Dr. D. Chandrasekhar, Dr. A. Hemasekhar, Mr. M. Murali, Ms. V. Geetha	Secure visible light communication through DRL-Smart Beam forming to protect against eavesdropping of wiretap	2020103224		23.12.2020

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Annexure 3

List of Students Presented their Innovations in IGNITE 1.0 (Lightening the Innovations)) 19thApril 09th July 2021

S.No.	Title	Student Name	Year	APP	Publications
1	AI based criminal identification before crime	1. V. Archana (194M1A05C1) 2. H. Vaishnavi (184M1A0532) 3. G. Ghnana Sindhu (184M1A0529) 4. S. Guru Prasad (194M1A05A3)	IV B.Tech	BAVSENSUE	IGNITE 1.0-Lightening the Innovations, AIC-SKU, 19th April to 09th July, 2021
2.	Vehicle security is our utmost priority	1. Y. Hemanth Kumar (184M1A05B7) 2. S. Sukumar (184M1A0580) 3. B. Mohan raj (184M1A0409) 4. E. Chandeeshwar (184M1A0324)	IV B.Tech	HSCM Vehicles	IGNITE 1.0-Lightening the Innovations, AIC-SKU, 19th April to 09th July, 2021

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BAVSENSUE
AI based criminal detectors before crime

Core Domain
Deep Tech

Sub Domain
AI based Facial
Reading

Team
Archana
Vaishnavi
Ghnana Sindhu
Guru Prasad

AI based criminal identification before crime

Problem: Since the number and forms of criminal activities are increasing at an alarming rate, also forcing agencies are taking preventing measures in various forms, still crimes are increasing day by day. Hence the team has identified that crime prevention is more important to reduce the crime rate. In the current scenario of rapidly increasing crime, traditional crime-solving techniques are unable to deliver results, being slow-paced and less efficient.

Solution: The team has come up with an innovative and unique idea of preventing crimes before it commits. Bavsensue is the product with AI-based facial recognition to predict crimes before they occur. Bavsensue provides software that can be installed in devices that can anticipate criminals based on their facial expressions and physical behavior.

USP: Identification of criminals before the crime. Helpful to the defense and police departments.

Bavsensue provides software that can be installed in devices to anticipate the criminal activities by humans before it occurs.

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HSCM VEHICLES
Your vehicle security is our responsibility

Core Domain — Automobile

Sub Domain — Security

Team
Y. Hemanth kumar
S. Sukumar
B. Mohan raj
E. Chandrasekhar

Vehicle security is our utmost priority

Problem: Every day we listen to the news like "I lose my vehicle" or "someone theft my car". So it has become a major problem that everyone facing all around the world. actually theft of bikes is a crime. there are a lot of cases where vehicles were not recovered. so we thought the security of the vehicles is most important to deal with.

Solution: We can add more security to the vehicle by implementing a finger print system for vehicles. By using the IoT process we can give an alert message to the customer when someone tries to access the bike illegally. It is a more safe and secure solution to the problem.

USP: The product is more secure and safe by finger lock system and ignition automatically starts we touch the finger print sensor. We alert message protocol system when illegal activities going to happen. We can regulate speed controls and a digital speedometer should be implemented.

HSCM vehicles
Your security is our responsibility

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Annexure 4

List of Students Presented their Projects AVISHKAAR-2022 (Students Innovation Competitions) 4th&5th March 2022

S.No.	Title	Student Name	Year	Branch
1	Alcohol Detector and Reactor	K. Satish Kumar (184M1A0342)	IV B.Tech	ME
2.	Driver Anti Sleep Device	C. Lakshmi Ganesh (194M1A0207)	IV B.Tech	EEE
3.	Solar powered rotary tiller	M. Pavan Kumar (204M1A0126) T.Nikitha (204M1A0140) V.Balaji (204M1A0145) G.Nagaraj (204M1A0116)	IV B.Tech	CIVIL
4.	Novel method of crop protection from wild animals by using advanced technology with low cost	K. Manjula (204M5A0404) K.Roopa (194M1A0463)	IV B.Tech	ECE
5	Sound pollution monitoring and controlling	G. Siva Bharathi (194M1A0437) K.Sandhya (194M1A0454)	IV B.Tech	ECE
6	Object Detection Bracelet for Blind People	V.Charan Reddy (194M1A05C3) V. Archana (194M1A05C1)	IV B.Tech	CSE
7	The Mocker: Skill Improvement Application	B. Yugandhar (194M1A0512) M.Yaswanth Reddy (194M1A0561)	IV B.Tech	CSE
8	Finger print system for Bike	Y. Hemanth Kumar (184M1A05B7)	IV B.Tech	CSE

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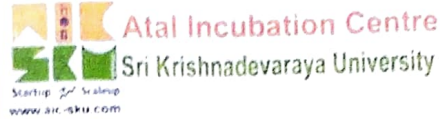## VEMU Institute of Technology is ranked in PERFORMER band by ARIIA 2021 rankings

INNOVATION CELL
(Government of India)

Ministry of Education
(Government of India)

AICTE

ATAL RANKING OF INSTITUTIONS
ON INNOVATION ACHIEVEMENTS

Certificate of Recognition

This is to certify that

VEMU INSTITUTE OF TECHNOLOGY

is recognised in the band "PERFORMER" under the category

"Colleges/Institutes (Private / Self Financed) (Technical)"

in Atal Ranking of Institutions on Innovation Achievement(ARIIA) 2021,

a flagship program of the Ministry of Education, Government of India.

29th December 2021.

Dr. Anil D Sahasrabudhe
Chairman, AICTE

Shri K Sanjay Murthy
Secretary (HE), MoE

Dr. Abhay Jere
Chief Innovation Officer
MoE's Innovation Cell

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Annexure 6

VEMU Institute of Technology is awarded as
–Startup Ecosystem Enabler Award (Category- Emerging) for the year 2021

Atal Incubation Centre
Sri Krishnadevaraya University
Startup *&* Scaleup
www.aic-sku.com

Azadi
Amrit Mahotsav

Certificate of Achievement

AIC-SKU Confederation
(supported by Atal Innovation Mission, NITI-Aayog, Govt. of India)
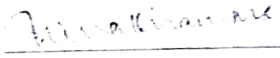
presents

Startup Ecosystem Enabler

Category - Emerging

⭐⭐

for the year 2021 to

VEMU Institute of Technology
Chitoor

for its efforts towards fostering entrepreneurial ecosystem in their campus. The award is presented on the occasion of 3rd Annual Startup Jāthara on 22nd January 2022.

Chief Executive Officer
AIC - SKU CONFEDERATION

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