| CRITERION 3 | RESEARCH, | INNOVATIONS | AND | EXTENSION |
|--------------------|-----------|--------------------|-----|---------------|
| | | | | DIT DI (OTOT) |

CRITERION 3.2.1

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge supported by dedicated centers for research, entrepreneurship, community orientation, Incubation, etc.

List of all the departments / centers / units are part of innovation and startup ecosystem of the institute

| Department / Center / Unit Name | Type of Department / Center / Unit | Stream / Discipline / Sector of focus | Student / Beneficiary Strength (2022-23) |
|--|--|--|---|
| Diet Innovation and Incubation Centre | Incubation Unit | Engineering | 1875 |
| Entrepreneurship Development Cell | Industry Institute Interface Unit | Engineering | 1875 |
| Training and Placement Cell | Industry Institute Interface Unit | Engineering | 1875 |
| Research and Development Centre | Research Unit / Park | Lesearch Unit / Park Engineering | |
| IPR Cell | IPR Cell / Patent Facilitation Unit / Technology Transfer Centre | Engineering | 2038 |
| DIET Literary and Cultural Club | Pre-incubation unit | Engineering | 1875 |
| Student Activity Centre | Pre-incubation unit | Engineering | 1875 |
| Robotics Lab | Academic Department with lab facility | Engineering | 1875 |
| DIET Civil Engineering Consultancy | Centre of Excellence with Advance Tools & Equipment | Civil | 96 |
| Electronics Simulation Lab | Academic Department with lab facility | Engineering | 511 |

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| Electrical Simulation Lab | Academic Department with lab facility | EEE | 169 |
|---|--|---------------|------|
| Internet of Things Lab | Academic Department with lab facility | CSE, EEE, ECE | 1285 |
| Department of Computer Science and Engineering | Academic Department with lab facility | B.Tech | 786 |
| Department of Civil Engineering | Academic Department with lab facility | B.Tech | 96 |
| Department of Electrical and Electronics Engineering | Academic Department with lab facility | B.Tech. | 169 |
| Department of Electronics and Communications Engineering | Academic Department with lab facility | B.Tech. | 330 |
| Department of Humanities and Basic Sciences | Academic Department with lab facility | B.Tech. | 318 |
| Department of Management and Business Administration | Academic Department with lab facility | Management | 40 |
| Diet ISTE Student Chapter | Industry Institute Interface Unit | Engineering | 300 |
| National Service Scheme | Industry Institute Interface Unit | Engineering | 150 |

Participation of HEI in Innovation & Entrepreneurship Initiatives of Ministry of Education

| Department / Center / Unit Name |
|---|
| Adopted National Innovation and Start-up Policy at the HEI |
| Establishment of Institution's Innovation Council (IIC) at HEI |
| Trained Innovation Ambassadors at HEI |
| Participation in Smart India Hackathon (SIH) |
| Facilitated listing start-ups/ technologies in Young India combating COVID with Knowledge, Technology and Innovation (YUKTI 2.0) portal of MIC |
| Participation in National Education Alliance of Technology (NEAT) |

List of patents

| S. NO | Title | Inventor | Patent Number | Year |
|-------|--|---|---------------|------|
| 1 | Design and deployment of automated smart streetlight with fault detection | J Dileep Kumar | 202341029416 | 2023 |
| 2 | A novel approach to control velocity by PMSM fed by Powerelectronic converter | Dr. A S LK Gopalamma | 202341029915 | 2023 |
| 3 | A smart system for air quality monitoring anddetect forest fires usingthe IOT | S Ramana Kumar Joga | 202341011076 | 2023 |
| 4 | Analysis of sustainablesupply chain management for fashion industry in India | Mrs. Sowjanya J | 202341001496 | 2023 |
| 5 | A Novel approach for integrating the techniques of IoT, Fog and Cloud Computing for Smart and Accurate Prediction of Earthquake | Hemanth Kumar Y | 202341003873 | 2023 |
| 6 | A method for generating electricity by utilizing microbial fuel cell for waste water teatment | Archana B.T. | 202341003254 | 2023 |
| 7 | Sanitizer dispenser cumblower | Dr A S L K Gopalamma | 372443-001 | 2023 |
| 8 | Microgrid integration with hybrid source electric charging station | Dr. Mrs. Alfoni Jose, Mr. K. Vijay kumar | 202211054799 | 2022 |
| 9 | Blockchain for IoT Security and Privacy ofviolation records | Dr. Prasanna kUmar Lakineni | 202241000478 | 2022 |
| 10 | Sustainable Transculentlight emitting concrete with optical fibres and preparation there of | Hemanth Kumar Yerabolu | 202241004387 | 2022 |
| 11 | An image processing based technique to helphr predict the pulse of working environment | Mr. Veerraju Sampenga | 202241008813 | 2022 |
| 12 | Artificial Intelligence based Techniques to check the feasibility ofproduct quality in manufacturing units | Mr. M.Srinivasarao | 202241009075 | 2022 |

| 13 | Advanced image processing technique for early detection of skin cancers and treating them through AI enabled nano particles | Mr. Veerraju Sampenga | 202241018535 | 2022 |
|----|--|--|--------------|------|
| 14 | Blast resisteance analysis and design of RCC multistored building | Mr. O. Suresh | 202241020115 | 2022 |
| 15 | Method of determination of flexural behavior of reinforced concrete beams | Mr. O. Suresh | 202241024364 | 2022 |
| 16 | The smart improvement of automatic solar light tracking structure by deep learning model | Mr. P. Srinivas, Dr. Kausar Jahan | 202241043234 | 2022 |
| 17 | Cryptography secure algorithm with user validating preservation scheme in IoT health care | Dr. B. Anjanee Kumar | 202241052638 | 2022 |
| 18 | Solar power generation forecasting using ensemble approach based on deep learning and statistical methods | Dr. Kausar Jahan, Dr. R. Vaikuntha Rao, Dr. P. Srinivas | 202241058112 | 2022 |
| 19 | Tracking the maximum power point of photovoltaic grids using ML and IoT | Dr. B. Anjanee Kumar | 202241058661 | 2022 |
| 20 | Prediction and recommendation system using sesmic waves and wind map analysis for architectural development | Dr. P. Poorna Priya | 202241059985 | 2022 |
| 21 | Design and development of automated attendance management system based on face recognition algorithms | Mr. P. Venkata Murali | 202241064573 | 2022 |
| 22 | A system and method of determining stability of functional equations in vector space using fixed point method | Dr. Ch. Prabhakara Rao | 202241068168 | 2022 |
| 23 | Spinel ferrite nanoparticles for environment monitoring and Bio- medical Applications | Mr. Nanduri Nagaraju | 202241068667 | 2022 |

| 24 | Novel nano formulations base drugs for enhanced bioavailability | Dr. P. Pavithra | 202241065549 | 2022 |
|----|--|------------------|--------------|------|
| 25 | Magnetic Spinal ferrite nano particles for targeted drug delivery of cyto toxic drugs in disease treatment | Dr. P. Pavithra | 202241065250 | 2022 |
| 26 | Hydrogen energy production polymer electrolyte membrane water electrolysis method | Mrs. K.Hemalatha | 202211069894 | 2022 |

MoUs

| S.No | Name of the institution/ industry/ corporate house | Year of signing MoU | Duration | The actual activities under each MOU year wise |
|------|--|------------------------|----------|---|
| 1 | | | | |
| | Andhra Pradesh State Skill Development Corporation (APSSDC) | 2018 | 5 years | Internships |
| 2 | National Research Development Corporation (NRDC) | 2019 | 5 years | Patents publication Assistance |
| 3 | | | | |
| | Eduskills | 2020 | 5 years | Student Internships |
| 4 | Sri Gowri Vyayam Sangham – GYM Centre | 2020 | 5 years | Physical Training |
| 5 | Bharat Sanchar Nigam Limited (BSNL) | 2021 | 5 years | Student Internships |
| 6 | Sri Shasha Prayathi Technologies Pvt. Ltd. | 2021 | 5 years | Student Internships |
| 7 | Phalanx Labs Pvt.ltd | 2022 | 5 years | Consultancy |
| 8 | Information Data System (Bharat Block Chain Network) | 2022 | 1year | Webinar |
| 9 | | | Tycal | Emergency Health |
| | Dr. Benerjee Hospital | 2022 | 5 years | Care |
| 10 | | 2022 | | |
| 11 | HIEE Empowering Engineers Pvt Ltd | 2023 | 3 years | Awareness Program |
| | COIGN | 2023 | 3 Years | CRT training |
| 12 | Datapro Computers Pvt. Limited (Approved Partner of NSDC) | 2023 | 5 years | Workshop |

| 13 | | | | |
|----|-------------------------------|------|---------|-------------------|
| | Must FinTech Technologies Ltd | 2023 | 3 years | Awareness Program |