DAYANANDA SAGAR UNIVERSITY

Hosur Main Road, Kudlu Gate, Bengaluru - 560 068

B. Tech –Computer Science & Engineering (Data Science)

Strategic Plan 2020-2023

1. Teaching Learning Process

Sl. No	Goal	Present Status	Strategy	Expected Outcome
1	Introducing Innovative Teaching Methods	OBE is in practice throughout the Institution.	Design thinking/case study, Flipped Classroom, Practical oriented learning etc	At least one activity per course
2	Developing e-content to encourage self learning aspects	e-content are being developed for some of the courses	Developing Videos and Smart books	Any 2 forms of e-content
3	Developing virtual Labs	Virtual labs are being used for some courses	Training to be given for developing virtual lab contents	At least one full-fledged lab
4	Enhancing multi-disciplinary approach in teaching	Open elective concept is being introduced	Promoting multidisciplinary projects.	One multidisciplinary project per student during 7th or 8th semester

5	Providing personal and career mentoring to students	Counseling cell created at college level	Enhancing mentoring activities	● No of meetings -at least 2 times per semester ● Weak students coaching -at least 2 per semester ● Effectiveness –at least 40% improvement
6	Promoting Technology Assisted self-learning	Students are undertaking NPTEL courses for credit transfer.	Encouraging students to undertake more online courses through self-study	At least 4 course per student with/without credit transfer during 4 Years
7	Converting Projects into Papers/products/patents	Currently following	Encouraging students to convert projects to papers / products/patents	80% - academic projects to papers 15% - projects to products 5% - projects to patents

2 Resources – Infrastructure:

Sl. No	Goal	Present Status	Strategy	Expected Outcome
1	Laboratory up gradation	Already followed	Purchase of new equipment as per up gradation of syllabus	At least 5 new equipment
2	Improvement in Computing facility	Needs improvement	Implementing Bring Your Own Device (BYOD) concept Providing new centralized server for engineering software such as Matlab, Lab View etc with central storage facility to all students and faculty members	●Each student should possess a laptop ●Any one laboratory course per department should be conducted using this centralized server facility
3	Creating smart class rooms/studios	Available in few department (ECE, MCA, MBA - Micro Teaching Laboratory)	Recording facility may be created in each class room to enhance e-content development	●One well equipped studio for college ●At least for one course, entire e-content is to be developed per semester

4	Creating Teaching & Learning resource repository	Not existing	Developing e-learning resource repository consists of PPTs, Videos, short summary, formula, Q-bank prepared / compiled by Faculty members etc and to be kept for free access to students	Repository for every subject should be created
5	Creating centralized e-data management system for the institution	Needs improvement	Providing a separate server for data management system for faculty and students.	All the student and faculty details should be available and accessible by everyone from the centralized server.
6	Creation of Continuing Education cell	Not existing	To organize brainstorming Lectures and motivate faculty and students towards continuous learning To create platform for offering online courses in NPTEL, Coursera, Udemy etc by our faculty	At least four programmes At least one online course per Sem to be offered in a year

3. Human Resources – Faculty

Sl. No	Goal	Present Status	Strategy	Expected Outcome
1	Faculty retention	Good faculty retention is maintained.	Retain eminent professors after retirement as Emeritus Professors Appointment of experts from industry & other institutions/ organizations as Adjunct faculty	Minimum 1 Emeritus Professor. Minimum 2 Adjunct Faculty in department
2	Faculty student ratio	1:16	Recruiting faculty members to meet the ratio	AICTE and NBA norms to be met.

3	Faculty Professional skill development	Needs improvement	Participation in conferences/ workshops/ seminars Acting as resource person- expert lecture, Chief Guest, chairperson, BOS member, etc ● Faculty exchange Program - National / International levels ● Organizing FDPs/ Seminars/ Conferences-Sponsored/self supporting and professional society activities	● 50% of faculty in a year ● At least one faculty per year ● Minimum 4 activities in a year
4	Faculty Induction and Pedagogical programme	Needs improvement	● Training for faculty with less than two years experience. Refresher Workshop for faculty with two-to-five-year experience	● Minimum one activity at institutional level per year

4.Human Resources - Supporting Staffs

Sl. No	Goal	Present Status	Strategy	Expected Outcome
1	Staff retention	Good staff retention	Reward and recognition to be given every year based on the performance.	Average year of experience of staff member in every department should be minimum 10 years.
2	Staff skill up gradation	Needs improvement	Sponsoring staffs to participate in skill development programmes with minimum two to five days.	50% in each dept per year
3	Staff Qualification up gradation	Needs improvement	Sponsoring staffs for higher studies	At least 10% at institutional Level

5.Human Resources - Students

S.No	Goal	Present Status	Strategy	Expected Outcome
1	Quality Placements	Needs improvement	● Conducting core/ software training programmes ● Introducing regular one credit courses for development of soft skills ● Conducting value added / one credit courses ● Introduce comprehensive test and viva in 7th semester ● Identifying and inviting more number of reputed companies for placement	● Minimum 4 programmes per year ● Every student must attend one ● Every student must attend one ● Minimum 2 tests as per GATE syllabus ● 95% of placement ● Increase the avragee salary by 5% every year
2	Student Participation in Innovation programmes	Needs improvement	● Engaging students to develop innovative projects ● Funding support to develop projects ● Organizing Exhibitions and Hackathons, etc	● Minimum 5 projects per to be scaled up. ● Minimum one project per student to be exhibited
3	Competitive examination and Higher studies	Needs improvement	● Conducting awareness/ training programmes ● Conduct mock tests for GATE & CAT	● Minimum 20% of students should involve in higher studies in each department ● Minimum 30% students should appear for competitive examinations with at least 10% success rate
4	Entrepreneurship development/ Promoting Start up	Needs improvement	Conducting awareness programmes Encouraging students to participate in idea contest and Pitch decks	At least two per year At least three per year

6.Research and Development

Sl. No	Goal	Present Status	Strategy	Expected Outcome
1	R&D Grants received	263 Research Projects have been Sanctioned (2490.16 Lakhs) ●The SEED money for internal projects is provided by the institution to encourage initial research related activities for young faculties ●The overhead charges of the grant received from the funding agency can be utilized for the purchase of equipments, partly for travel expenses pertaining to attending conferences abroad etc.	●Focus more on Multi-disciplinary research. ●International funding can be obtained ●Search for funding from other funding organizations (NGOs/Ministry) ●Every faculty member with Ph.D. qualification shall apply for a minimum of one funded research project per year	Minimum 1.5 Crore funding per year from external funding agency
2	Sponsored Research Programme Organised	545 Sponsored Programme Organised (423.08 Lakhs)	●Search for New and Viable funding agencies to provide financial support for organising FDP/Workshop and Conferences ●The Institution supports for organization of high-level conferences/workshops/seminars	Minimum 25 FDP /workshop and 3 international conferences per year supported by external funding agency

3	Publication (Journals and Books)	Total Publication in Journals: 1349Book Published:129	●Publication of research work in Science Citation Index (SCI)/Scopus Journal ●Faculty member with Ph.D. qualification should publish minimum one SCI paper per year and Faculty with Masters Degree qualification should publish a minimum of two Scopus indexed paper per year ●Faculty members are appreciated with appropriate monitory incentives for their Web of Science/Scopus indexed journal publications Faculty members are motivated to write Book and publish with renowned publisher.	●Average of one paper per faculty in SCI/Scopus journals. ●Minimum 600 Scopus indexed publications, out of which 300 should be in SCI journals per year

4	Improvement of Citation Index	Total Google Scholar Citations	●Faculty members should utilize either Urkund/ Turnitin-Ithenticate plagiarism software's before submitting the research papers/project proposals and its similarity index should be less than 15% ●Quality publications will enhance citation index. Incentives can be provided for publications with high citation.	Average Scopus indexed citations should cross 4 per paper for last 3 year publications.
5	Joint/Collaborative Research	Work Initiated	●The Institute encourages faculty members to establish network with other higher institutions of learning and research organizations within India and abroad and go for MOU ●Registration Fee, travel, boarding and lodging expenses to participate in conferences/workshops/seminars and other professional development activities have to be provided by the Institution partly	●10 collaborative / joint research projects with lead institutions / R&D laboratories / industries. ●Atleast one faculty should opt for Post- Doctoral Fellowship abroad or in lead R&D institutions per year ●At least two faculty to be trained with collaboration partners and reputed organizations like DRDO, CSIR, IITs, IISc, foreign universities on every year

6	Patent/IPR	● 13 Patents Granted ● 70 Patents Published	● Financial and Administrative support is provided to all faculty/staff/students for filling of patents/other IPR related activities ● Good projects to be incubated by TBI with funding support from KEC/TBI and other TBI Schemes	5 patents to be get granted every year Minimum 15 patents should be filed per year. Atleast one technology transfer needs to take place and one patent to be commercialized.
7	Centre of Excellence	Three centers are in the pipeline to be established	● Based on the core strength and expertise available, each Department to plan to establish one centre of excellence.	One/Two Center of Excellence in each department.
8	Research Centre	16 Research Centers with 247 Ph.Ds	● Stipend for full time research scholars is provided by the Institution ● Performance incentives is provided to eligible faculty members with PhD qualification per year based on their research performance evaluation i.e. research publications, patents and extramural funded projects	● 100% PhD should get recognized as supervisors ● Minimum 5 scholar should register per year in each centre and atleast 3 should get graduated every year

7. Collaboration at National and International level

S.No	Goal	Present Status	Strategy	Expected Outcome
1	Promoting MoUs	Limited to local industries	Identifying more number of Industries/Higher Education Institutions at national and international level for collaborative works	●At least 2 new MoUs per year ●At least three activities (Expert lecture/ Industrial Training, Internship, Industrial Visit, Industrial project) from each MoU in every academic year
2	Industrial Training for Faculty	Average	Encouraging Faculty members to get industrial exposure for minimum 5 days	25% of facultyin a year
3	Industrial Training for Students	Satisfactory	Creating list of core industries and encouraging students for Industrial visit, In-Plant Training and Internship	● Master list of core industries to be kept in the department ● At least 2 industrial visits per academic year ● At least 4 industrial visits per student in four years ● At least 2 In plant training per student in four years ● 100% of students should go for internship at industries in every department for an academic year

4	Student exchange programme	Low in number	Sponsoring students to pursue education in reputed Institutions in India and abroad under student exchange programme	At least 1% of total students at institutional level in an academic year for minimum six months
5	Faculty Exchange programme	Very few	Sponsoring Faculty members to teach / pursue research in reputed Institutions in India and abroad/ R&D laboratories.	At least 3% of total faculty members at institutional level in an academic year for minimum six months
6	Training Programmes for Industrial Personnels	Needs improvement	Identifying the training needs of Industry and the relevant expert faculty	● Master list of area of training ● Minimum one training programme at department level in a year

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