

**SDM College of Engineering and Technology, Dhavalagiri, Dharwad-580002**

## **STRATEGIC PLAN**

**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING**

**[5 Year Plan: 2022-2026]**

### **Objectives:**

The purpose of this document is to establish the **roadmap for next 5 years** to plan how we wish to see our Institution in the future. This plan is **based on the vision and mission** established and also the additional focus suggested by the management keeping focus on National Educational Policy-NEP-2020. Mission statements are the **basic perspectives** driving the newer strategies established in this report. This report will serve as baseline for **budgeting** and also to establish the Institutional level **ANNUAL performance appraisal**.

### **Institutional Vision and Mission:**

#### **VISION:**

To develop **competent** professionals with **human values**.

#### **MISSION:**

- M1.** To have **contextually relevant** Curricula.
- M2.** To promote **effective Teaching Learning** Practices supported by **Modern Educational Tools and Techniques**.
- M3.** To enhance **Research Culture**.

**M4.** To involve the **Industrial Expertise** for connecting Classroom contents to real-life situations.

**M5.** To inculcate **Ethics and soft-skills** leading to overall personality development.

**Additional Focus:**

F1: Academic results- **M1, M2, M4**

F2: Curriculum relevance- **M1**

F3: Value additions: Teaching, Soft skills, Use of ICT / Presentation, Discussion Groups (Communication skills)- **M2 & M5**

F4: Community oriented services- **M3 & M5**

F5: Additional Academic perspectives: Research papers, Sponsored Projects, Root cause analysis for rejected papers and filling gap.-**M3**

F6: Accreditation and Ranking: NBA, NAAC and NIRF - **M1 to M5 & Establishment of strong IQAC to support quality checks and Institutional repository.**

F7: National Educational Policy- NEP-2020 – **M1 to M5.( Experiential Learning)**

**Planning Increments:**

1<sup>st</sup> year to 5<sup>th</sup> year, i.e. **2022** to **2026**; year commencing from 1<sup>st</sup> of January and ending by 31<sup>st</sup> December.

**Contact Details:**

1. **Dr. K. Gopinath**, Principal, SDM College of Engineering and Technology, Dharwad-580002.

Email: [principal@sdmcet.ac.in](mailto:principal@sdmcet.ac.in)

Mobile: 9538677470

Focus	Perspective	STRATEGIC PLAN				
		2022	2023	2024	2025	2026
<b>Curriculum Relevance</b>	Re-establishing the relevance of critical thinking in Course outcomes and raising levels focusing on Experiential learning of NEP	<ul style="list-style-type: none"> <li>Introducing industry oriented electives</li> </ul>	<ul style="list-style-type: none"> <li>Introducing industry oriented electives</li> </ul>	<ul style="list-style-type: none"> <li>Introducing industry oriented electives</li> </ul>	<ul style="list-style-type: none"> <li>Introducing industry oriented electives</li> </ul>	<ul style="list-style-type: none"> <li>Introducing industry oriented electives</li> </ul>
	Re-establishing the relevance of Program Articulation Matrix	<ul style="list-style-type: none"> <li>Review with internal and External audit experts.</li> <li>- BOS/DUGC</li> </ul>	<ul style="list-style-type: none"> <li>Review with internal and External audit experts.</li> <li>- BOS/DUGC</li> </ul>	<ul style="list-style-type: none"> <li>Review with internal and External audit experts.</li> <li>- BOS/DUGC</li> </ul>	<ul style="list-style-type: none"> <li>Review with internal and External audit experts.</li> <li>- BOS/DUGC</li> </ul>	<ul style="list-style-type: none"> <li>Review with internal and External audit experts.</li> <li>- BOS/DUGC</li> </ul>
	Conducting internal and External Audits	<ul style="list-style-type: none"> <li>Departmental IQAC will conduct Academic audit every semester. External audit will be conducted every year by faculty from premier institutions</li> </ul>	<ul style="list-style-type: none"> <li>Departmental IQAC will conduct Academic audit every semester. External audit will be conducted every year by faculty from premier institutions</li> </ul>	<ul style="list-style-type: none"> <li>Departmental IQAC will conduct Academic audit every semester. External audit will be conducted every year by faculty from premier institutions</li> </ul>	<ul style="list-style-type: none"> <li>Departmental IQAC will conduct Academic audit every semester. External audit will be conducted every year by faculty from premier institutions</li> </ul>	<ul style="list-style-type: none"> <li>Departmental IQAC will conduct Academic audit every semester. External audit will be conducted every year by faculty from premier institutions</li> </ul>
	Any Other	<ul style="list-style-type: none"> <li>Cloud : AWS/Google cloud/Microsoft azure</li> <li>Budget – 1Lakh</li> </ul>	<ul style="list-style-type: none"> <li>Cloud : AWS/Google cloud/Microsoft azure</li> <li>Budget – 1Lakh</li> </ul>	<ul style="list-style-type: none"> <li>Cloud : AWS/Google cloud/Microsoft azure</li> <li>Budget – 1.5 Lakhs</li> </ul>	<ul style="list-style-type: none"> <li>Cloud : AWS/Google cloud/Microsoft azure</li> <li>Budget – 2 Lakhs</li> </ul>	<ul style="list-style-type: none"> <li>Cloud : AWS/Google cloud/Microsoft azure</li> <li>Budget – 2.5 Lakhs</li> </ul>

Focus	Perspective	2022	2023	2024	2025	2026									
<b>Exam Results</b>	Bridge Courses	<ul style="list-style-type: none"> <li>HTML, CSS, JS, C, Data Communications, PHP basics, latest trending tools</li> </ul>	<ul style="list-style-type: none"> <li>HTML, CSS, JS, C, Data Communications, PHP basics, latest trending tools</li> </ul>	<ul style="list-style-type: none"> <li>HTML, CSS, JS, C, Data Communications, PHP basics, latest trending tools</li> </ul>	<ul style="list-style-type: none"> <li>HTML, CSS, JS, C, Data Communications, PHP basics, latest trending tools</li> </ul>	<ul style="list-style-type: none"> <li>HTML, CSS, JS, C, Data Communications, PHP basics, latest trending tools</li> </ul>									
	Tutorials for complex courses	<ul style="list-style-type: none"> <li>Data Structure, FAFL</li> </ul>	<ul style="list-style-type: none"> <li>Data Structure, FAFL</li> </ul>	<ul style="list-style-type: none"> <li>Data Structure, FAFL</li> </ul>	<ul style="list-style-type: none"> <li>Data Structure, FAFL</li> </ul>	<ul style="list-style-type: none"> <li>Data Structure, FAFL</li> </ul>									
	Strengthening Experiential Learning component	<ul style="list-style-type: none"> <li>Project based teaching in IoT</li> </ul> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Title</th> <th>Budget(in Rs)</th> </tr> </thead> <tbody> <tr> <td>IoT</td> <td>1Lakh</td> </tr> <tr> <td>Digital Circuits</td> <td>25,000</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>Project based teaching in Digital Circuits for 3<sup>rd</sup> semester.</li> <li>Project based teaching in Software engineering for 5<sup>th</sup> semester.</li> <li>Case study based learning for storage management, Big Data</li> </ul>	Title	Budget(in Rs)	IoT	1Lakh	Digital Circuits	25,000	<ul style="list-style-type: none"> <li>Project based teaching in IoT,</li> <li>Project based teaching in Digital Circuits for 3<sup>rd</sup> semester.</li> </ul> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Title</th> <th>Budget(in Rs)</th> </tr> </thead> <tbody> <tr> <td>IoT</td> <td>1Lakh</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>Project based teaching in Software engineering for 5<sup>th</sup> semester.</li> <li>Case study based learning for storage management, Big Data</li> </ul>	Title	Budget(in Rs)	IoT	1Lakh	<ul style="list-style-type: none"> <li>Project based teaching in IOT</li> <li>Project based teaching in Digital Circuits for 3<sup>rd</sup> semester.</li> <li>Project based teaching in Software engineering for 5<sup>th</sup> semester.</li> <li>Case study based learning for storage management, Big Data Analytics</li> </ul>	<ul style="list-style-type: none"> <li>Project based teaching in IOT</li> <li>Project based teaching in Digital Circuits for 3<sup>rd</sup> semester.</li> <li>Project based teaching in Software engineering for 5<sup>th</sup> semester.</li> <li>Case study based learning for storage management, Big Data Analytics</li> </ul>
Title	Budget(in Rs)														
IoT	1Lakh														
Digital Circuits	25,000														
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		management, Big Data Analytics	Analytics			
Industry Connectivity for Classroom	<ul style="list-style-type: none"> <li>Assistance of industry mentor for students – 3<sup>rd</sup> and 4<sup>th</sup> year students.</li> <li>PEP Talk by alumni at 3<sup>rd</sup> year level</li> </ul>	<ul style="list-style-type: none"> <li>Assistance of industry mentor for students – 3<sup>rd</sup> and 4<sup>th</sup> year students.</li> <li>PEP Talk by alumni at 3<sup>rd</sup> year level</li> </ul>	<ul style="list-style-type: none"> <li>Assistance of industry mentor for students – 3<sup>rd</sup> and 4<sup>th</sup> year students.</li> <li>PEP Talk by alumni at 3<sup>rd</sup> year level</li> </ul>	<ul style="list-style-type: none"> <li>Assistance of industry mentor for students – 3<sup>rd</sup> and 4<sup>th</sup> year students.</li> <li>PEP Talk by alumni at 3<sup>rd</sup> year level</li> </ul>	<ul style="list-style-type: none"> <li>Assistance of industry mentor for students – 3<sup>rd</sup> and 4<sup>th</sup> year students.</li> <li>PEP Talk by alumni at 3<sup>rd</sup> year level</li> </ul>	<ul style="list-style-type: none"> <li>Assistance of industry mentor for students – 3<sup>rd</sup> and 4<sup>th</sup> year students.</li> <li>PEP Talk by alumni at 3<sup>rd</sup> year level</li> </ul>
Any Other	<ul style="list-style-type: none"> <li>Peer learning for III &amp; V semester</li> </ul>	<ul style="list-style-type: none"> <li>Peer learning for III &amp; V semester</li> </ul>	<ul style="list-style-type: none"> <li>Peer learning for III &amp; V semester</li> </ul>	<ul style="list-style-type: none"> <li>Peer learning for III &amp; V semester</li> </ul>	<ul style="list-style-type: none"> <li>Peer learning for III &amp; V semester</li> </ul>	<ul style="list-style-type: none"> <li>Peer learning for III &amp; V semester</li> </ul>

Focus	Perspective	2022	2023	2024	2025	2026
<b>Research</b>	IPR: Copyrights and Patents	<ul style="list-style-type: none"> <li>One IPR / patents</li> </ul>		<ul style="list-style-type: none"> <li>One IPR / patents</li> </ul>		<ul style="list-style-type: none"> <li>One IPR / patents</li> </ul>
	Paper Publications	<ul style="list-style-type: none"> <li>Scopus/SCI/ WoS/UGC : 5</li> </ul>	<ul style="list-style-type: none"> <li>Scopus/SCI/ WoS/UGC : 5</li> </ul>	<ul style="list-style-type: none"> <li>Scopus/SCI/ WoS/UGC : 5</li> </ul>	<ul style="list-style-type: none"> <li>Scopus/SCI/ WoS/UGC : 5</li> </ul>	<ul style="list-style-type: none"> <li>Scopus/SCI/ WoS/UGC : 5</li> </ul>
	Funded Projects	<ul style="list-style-type: none"> <li>No of Research Proposals submission: 4</li> </ul>	<ul style="list-style-type: none"> <li>No of Research Proposals submission: 2</li> </ul>	<ul style="list-style-type: none"> <li>No of Research Proposals submission: 4</li> </ul>	<ul style="list-style-type: none"> <li>No of Research Proposals submission: 4</li> </ul>	<ul style="list-style-type: none"> <li>No of Research Proposals submission: 4</li> </ul>
	Analysis on project proposals for its quality relevance	<ul style="list-style-type: none"> <li>Internal review with faculty from other disciplines those who got projects.</li> </ul>	<ul style="list-style-type: none"> <li>Review with faculty from external institution</li> </ul>	<ul style="list-style-type: none"> <li>Review with faculty from external institution</li> </ul>	<ul style="list-style-type: none"> <li>Review with faculty from external institution</li> </ul>	<ul style="list-style-type: none"> <li>Review with faculty from external institution</li> </ul>
	Any Other	FDP/	FDP/ Symposium/	FDP/ Symposium/	FDP/ Symposium/	FDP/ Symposium

		Symposium Budget-1Lac	Conference Budget-2Lacs	Conference Budget-2Lacs	Conference Budget-2Lacs	/ Conference Budget-2Lacs
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Focus	Perspective	2022	2023	2024	2025	2026
<b>Value additions</b>	Learning for Placement	<ul style="list-style-type: none"> <li>• Aptitude test (C-III)</li> <li>• Implementation of real life Problems (DAA),</li> <li>• Project based Learning - DBMS</li> </ul>	<ul style="list-style-type: none"> <li>• Aptitude test (C-III)</li> <li>• Implementation of real life problems(DAA),</li> <li>• Project based Learning - DBMS</li> </ul>	<ul style="list-style-type: none"> <li>• Aptitude test (C-III)</li> <li>• Implementation of real life problems(DAA),</li> <li>• Project based Learning - DBMS</li> </ul>	<ul style="list-style-type: none"> <li>• Aptitude test (C-III)</li> <li>• Implementation of real life problems(DAA),</li> <li>• Project based Learning - DBMS</li> </ul>	<ul style="list-style-type: none"> <li>• Aptitude test (C-III)</li> <li>• Implementation of real life problems(DAA),</li> <li>• Project based Learning - DBMS</li> </ul>
	Soft Skills	<ul style="list-style-type: none"> <li>• V Semester: training session on Soft Skills through CIII</li> </ul>	<ul style="list-style-type: none"> <li>• V Semester: training session on Soft Skills through CIII</li> </ul>	<ul style="list-style-type: none"> <li>• V Semester: training session on Soft Skills through CIII</li> </ul>	<ul style="list-style-type: none"> <li>• V Semester: training session on Soft Skills through CIII</li> </ul>	<ul style="list-style-type: none"> <li>• V Semester: training session on Soft Skills through CIII</li> </ul>
	Discussion Group	<ul style="list-style-type: none"> <li>• Group Discussion and Mock Interview</li> </ul>	<ul style="list-style-type: none"> <li>• Group Discussion and Mock Interview</li> </ul>	<ul style="list-style-type: none"> <li>• Group Discussion and Mock Interview</li> </ul>	<ul style="list-style-type: none"> <li>• Group Discussion and Mock Interview</li> </ul>	<ul style="list-style-type: none"> <li>• Group Discussion and Mock Interview</li> </ul>
	English Communication Skills	<ul style="list-style-type: none"> <li>• Conducting workshop on competitive exams in collaboration with CIII and</li> </ul>	<ul style="list-style-type: none"> <li>• Conducting workshop on competitive exams in collaboration with CIII and</li> </ul>	<ul style="list-style-type: none"> <li>• Conducting workshop on competitive exams in collaboration with CIII and</li> </ul>	<ul style="list-style-type: none"> <li>• Conducting workshop on competitive exams in collaboration with CIII and</li> </ul>	<ul style="list-style-type: none"> <li>• Conducting workshop on competitive exams in collaboration with CIII and</li> </ul>

		Humanity Department	Humanity Department	Humanity Department	Humanity Department	Humanity Department
	Use of ICT	<ul style="list-style-type: none"> <li>• Certificate courses on Python and App Development for 2<sup>nd</sup> and 3<sup>rd</sup> year self learning. Subsequent projects are based on these topics.</li> </ul>	<ul style="list-style-type: none"> <li>• Certificate courses on Python and App Development for 2<sup>nd</sup> and 3<sup>rd</sup> year self learning. Subsequent projects are based on these topics.</li> </ul>	<ul style="list-style-type: none"> <li>• Certificate courses on Python and App Development for 2<sup>nd</sup> and 3<sup>rd</sup> year self learning. Subsequent projects are based on these topics.</li> </ul>	<ul style="list-style-type: none"> <li>• Certificate courses on Python and App Development for 2<sup>nd</sup> and 3<sup>rd</sup> year self learning. Subsequent projects are based on these topics.</li> </ul>	<ul style="list-style-type: none"> <li>• Certificate courses on Python and App Development for 2<sup>nd</sup> and 3<sup>rd</sup> year self learning. Subsequent projects are based on these topics.</li> </ul>
	Any Other					

Focus	Perspective	2022	2023	2024	2025	2026
<b>Accreditation and Ranking</b>	NBA	<ul style="list-style-type: none"> <li>• One day review meeting / workshop after every semester, and to prepare the incremental SAR.</li> <li>• Monthly review meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Apply for NBA Accreditation.</li> <li>• Monthly review meeting by NBA coordinator</li> </ul>	<ul style="list-style-type: none"> <li>• One day review meeting / workshop after every semester, and to prepare the incremental SAR.</li> <li>• Monthly review meeting</li> </ul>	<ul style="list-style-type: none"> <li>• One day review meeting / workshop after every semester, and to prepare the incremental SAR.</li> <li>• Monthly review meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Apply for NBA Accreditation.</li> <li>• Monthly review meeting by NBA coordinator</li> </ul>
	NAAC	<ul style="list-style-type: none"> <li>• Review meeting / workshop after every semester, report will be prepared and submitted Institute NAAC Coordinator.</li> </ul>	<ul style="list-style-type: none"> <li>• Review meeting / workshop after every semester, report will be prepared and submitted Institute NAAC Coordinator.</li> </ul>	<ul style="list-style-type: none"> <li>• Review meeting / workshop after every semester, report will be prepared and submitted Institute NAAC Coordinator.</li> </ul>	<ul style="list-style-type: none"> <li>• Review meeting / workshop after every semester, report will be prepared and submitted Institute NAAC Coordinator.</li> </ul>	<ul style="list-style-type: none"> <li>• Review meeting / workshop after every semester, report will be prepared and submitted Institute NAAC Coordinator.</li> </ul>
	NIRF	<ul style="list-style-type: none"> <li>• Review</li> </ul>	<ul style="list-style-type: none"> <li>• Review</li> </ul>	<ul style="list-style-type: none"> <li>• Review</li> </ul>	<ul style="list-style-type: none"> <li>• Review</li> </ul>	<ul style="list-style-type: none"> <li>• Review</li> </ul>

	ranking	meeting after every semester to collect and present the data to NIRF in-charge.	meeting after every semester to collect and present the data to NIRF in-charge.	meeting after every semester to collect and present the data to NIRF in-charge.	meeting after every semester to collect and present the data to NIRF in-charge.	meeting after every semester to collect and present the data to NIRF in-charge.
	Any Other					

Focus	Perspective	2022	2023	2024	2025	2026	
<b>Community Oriented Services</b>	Awareness Program	<ul style="list-style-type: none"> <li>• Career opportunity</li> <li>• Health awareness among girls</li> </ul>	<ul style="list-style-type: none"> <li>• Career opportunity</li> <li>• Health awareness among girls</li> </ul>	<ul style="list-style-type: none"> <li>• Career opportunity</li> <li>• Health awareness among girls</li> </ul>	<ul style="list-style-type: none"> <li>• Career opportunity</li> <li>• Health awareness among girls</li> </ul>	<ul style="list-style-type: none"> <li>• Career opportunity</li> <li>• Health awareness among girls</li> </ul>	
	Learning Programs	<ul style="list-style-type: none"> <li>• Computer awareness (MS Office),</li> <li>• Vedic mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Computer awareness (MS Office),</li> <li>• Vedic mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Computer awareness (MS Office),</li> <li>• Vedic mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Computer awareness (MS Office),</li> <li>• Vedic mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Computer awareness (MS Office),</li> <li>• Vedic mathematics</li> </ul>	
	Technology Transfer Programs	<ul style="list-style-type: none"> <li>• Digital literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Digital literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Digital literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Digital literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Digital literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Digital literacy</li> </ul>
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