



**Daffodil**  
*International*  
**University**

# Strategic Plan

Year 2025 - 2028

Bachelor of Science in Software Engineering

Department of Software Engineering  
Faculty of Science and Information Technology  
**Daffodil International University**  
Bangladesh

## **A. Introduction**

This strategic plan outlines the roadmap for the Program Offering Entity (POE) to achieve its vision, mission, and objectives over the next several years. It details the necessary actions, resource alignment, and continuous quality improvement measures essential for managing the academic program and maintaining accreditation standards.

## **Objectives of the Strategic Plan**

### **General objective**

The general objective is to establish quality academic culture in the entity department/institute/faculty for the attainment of intended skills, knowledge and attitude so that they can meet the needs of the employers, society at large and even the needs of the global community leading to the socio-economic development of Bangladesh.

### **Specific Objectives**

Some specific objectives are given below:

- 1) To establish good governance ensuring for such a learning environment in the entity so that the graduates can attain the intended learning outcomes in terms of knowledge, skills and attitude and be fit to meet the society.
- 2) To increase the quality of each entering undergraduate class, while maintaining our commitment to ethnic and cultural diversity.
- 3) To develop an admissions strategy to align each entering class with academic program targets developed by the university.
- 4) To strengthen opportunities for student learning
- 5) To modernize and update the curricula according to the needs of the society
- 6) To ensure entry of good quality learners with commitment so that graduates can achieve desired standards.
- 7) To improve physical facilities to create better learning condition for the achievement of learning outcomes.
- 8) To ensure effective teaching-learning for quality education (for attaining intended learning outcomes)
- 9) To establish fair, effective procedures to assess achievement of course learning outcomes by the students
- 10) To improve student support services such a level so that students' personal and academic needs can be met.
- 11) To make an effective team of teaching and non-teaching staffs for quality education.
- 12) To develop capacity, formulate policy and undertake program for innovative research.
- 13) To maintain and enhance internal quality assurance (IQA) practices.

### **Key Documents Consulted**

- i) Accreditation standard & Criteria
- ii) Vision, mission and objectives of the POE & HEI
- iii) Academic Ordinance/Rules
- iv) Annual Budget of the HEI/POE
- iv) Last Strategic Plan 2020-2023 for the department of Software Engineering

## **B. Vision, Mission, Goal(s) and Objectives of the POE**

### **Vision of the POE**

To become a tertiary level academic and research centre of excellence in the field of Software Engineering for creating global leader with high self-esteem who are able to accept and overcome challenges in a fast-changing environment.

### **Mission of the POE**

- I. To empower aspiring software engineers with a comprehensive education, fostering innovation, critical thinking, and ethical leadership to drive technological advancements.
- II. To cultivating a diverse community of software engineers equipped with technical expertise, problem-solving abilities, and a commitment to creating impactful solutions that positively transform industries and communities.
- III. To prepare skilled graduates embracing lifelong learning and adaptability that are aligned with National Development Agenda (NDA), Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs).

### **Goal(s) of the POE**

The program is designed to satisfy the growing demands of software professionals throughout the country and to produce skilled manpower for the global IT Market. It provides the students an opportunity to obtain a broad knowledge of Software Engineering, Programming, Software Development Engineering, Computer System Engineering, Electronics Engineering and Software Management. The goal of this degree is the generation of competent software engineering graduates specialized in Cyber Security, Robotics and Data Science to meet increasing demands for the area both in domestic and international market.

### **Objectives of the POE**

Program Educational Objectives (PEO) of B.Sc. in Software Engineering

No.	PEO Statement
PEO-1	<b>Professionalism:</b> Graduates will establish themselves as practicing global professionals having high esteem in Software Engineering or related fields for accepting and overcoming challenges in a fast-changing environment.
PEO-2	<b>Continuous Personal Development:</b> Graduates will engage in lifelong pursuit of knowledge and interdisciplinary learning appropriate for research, industrial and academic careers.
PEO-3	<b>Social Engagement:</b> Graduates will contribute to the well-being of people and society by producing research, innovation and entrepreneurship that are aligned with national development agenda, Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs).

### C. Resources Alignment with the teaching-learning & assessment of the Courses

To align with teaching-learning and assessment of the course the following resource allocation will be done:

1. Enhance laboratory facilities by upgrading equipment and resources to improve hands-on learning experiences.
2. Upgrade computing and internet infrastructure to support advanced learning tools and online resources effectively.
3. Improve library resources by expanding and updating collections, including digital resources, to support research and course content needs.
4. Increase access to educational software and learning platforms to align with course requirements and assessment methods.
5. Develop collaborative spaces to facilitate group projects and interactive learning activities.
6. Implement Outcome-Based Education (OBE) management system to ensure teaching methods and assessments align with desired learning outcomes.
7. Support professional development for faculty to stay current with the latest teaching strategies, technology, and industry trends.

### D. SWOT Analysis

**SWOT analysis** provides a holistic overview of a university program's internal capabilities and external environment. This insight is essential for creating a strategic plan that is realistic, sustainable, and aligned with the institution's long-term goals.

The SWOT analysis was conducted using the 63 criteria set by the Bangladesh Accreditation Council. A survey, rated on a 5-point scale, was administered to students, alumni, and teachers. We also considered how some criteria might vary in different situations during our analysis. All these factors were taken into account in preparing this analysis.

#### Strengths:

1. **Criterion 1-1: Clear Vision, Mission, and Objectives** - The department has a well-defined vision, mission, and objectives that align with strategic goals, enhancing cohesion and effectiveness. These are publicly available on the website and displayed within the department.
2. **Criterion 1-3: Robust Policies for Safety and Ethics** - A strong policy framework ensures safety, respect, and ethics, supported by active committees and workshops, with information accessible online.
3. **Criterion 1-4: Organized Academic Calendar** - The department maintains a systematic academic calendar, improving time management and adherence to schedules, regularly circulated and monitored.
4. **Criterion 1-6: Efficient IT-Based Student Tracking** - A digital system tracks student progress and achievements, utilizing an ERP system and mentoring to facilitate personalized education.
5. **Criterion 2.1: Well-Defined Organizational Structure** - A clear organizational structure with assigned responsibilities enhances efficiency and accountability, supported by a displayed organogram and service charter.

6. **Criterion 2.3: Financial Autonomy** - Financial independence allows for flexible, innovative educational approaches, with departmental heads empowered to make financial decisions within a specified range.
7. **Criterion 3-1: Transparent Recruitment and Admission Processes** - The department follows fair and transparent recruitment and admission procedures, adhering to UGC guidelines and maintaining evidence of fairness in the SAR.
8. **Criterion 4-1: Comprehensive Curriculum Design** - Regularly updated curriculum aligned with industry needs, quality frameworks, and program learning outcomes, ensuring relevance and high standards.
9. **Criterion 5-1: Focus on Teaching, Learning, and Assessment** - The department emphasizes innovative teaching, effective learning strategies, and rigorous assessment, supported by detailed rubrics and a robust learning management system.
10. **Criterion 6-5: Supportive Student Services** - The department offers extensive support through academic guidance, counselling, and co-curricular activities, ensuring student well-being and engagement.
11. **Criterion 6-8: Career Counselling and Guidance** - Dedicated career counselling services, including a Career Development Centre, help students navigate their career paths effectively.
12. **Criterion 7-3: Support for Faculty Development** - The department actively supports faculty in pursuing advanced studies, with many on study leave in various countries, bringing diverse knowledge back to the university.
13. **Criterion 7-7: Competent Practitioner Recruitment** - The department hires practitioners from recognized industries to provide students with practical insights, enhancing the learning environment.
14. **Criterion 8-2: Effective Library and Facility Management** - The department offers a well-managed library and modern facilities, including specialized labs and an e-library, supporting research and learning.
15. **Criterion 9-1: Dedicated Research Policies** - A defined research policy with allocated budgeting supports robust research initiatives, contributing to academic excellence.
16. **Criterion 10-1: Proactive Institutional Quality Assurance Cell (IQAC)** - The IQAC ensures continuous quality improvement through systematic monitoring, evaluation, and review of programs and policies, fostering a culture of excellence.

#### **Weaknesses:**

1. **Criterion 1-2: Lack of Clear Strategic Plan** - The absence of a well-communicated strategic plan may lead to misalignment and inefficiencies across the department, hindering growth and innovation.
2. **Criterion 1-5: Inadequate Class Size Policy** - The current class size policy does not align with BAC guidelines, leading to overcrowded classrooms and potentially diminishing the quality of instruction and student engagement.
3. **Criterion 5-7: Unclear Progression Rules** - Inconsistent progression rules and insufficient prerequisites can create confusion among students and impact their academic journey and outcomes.
4. **Criterion 5-8: Misalignment of CLOs and TLA Activities** - Misalignment between Course Learning Outcomes (CLOs) and Teaching-Learning Activities (TLAs) can hinder effective teaching and student preparation for assessments and professional challenges.

5. **Criterion 5-9: Insufficient Tutorial Classes** - The limited availability and predominantly online format of tutorial classes may not effectively address students' diverse learning needs, impacting their academic performance.
6. **Criterion 6-1: Inappropriate Admission Policy** - A misaligned admission policy can result in a mismatch in the student body, leading to higher dropout rates and lower student satisfaction.
7. **Criterion 6-6: Weak Alumni Association** - An inactive alumni association reduces networking opportunities and engagement, limiting professional and developmental benefits for both students and alumni.
8. **Criterion 6-9: Poor Management of Struggling Students** - Inadequate support for struggling students can lead to lower retention rates, student satisfaction, and a negative impact on the department's reputation.
9. **Criterion 7-1: Shortage of Qualified and Experienced Faculty** - The department lacks sufficient senior academic staff, limiting mentorship opportunities and academic expertise, which affects the quality of education and research.
10. **Criterion 7-4: Insufficient Support for Faculty Professional Development** - The tight schedule of classes and mentoring responsibilities restricts faculty members' opportunities for professional development, impacting their ability to maintain educational excellence.
11. **Criterion 7-8: Unfavourable Teacher-Student Ratio and Faculty Composition** - The current teacher-student ratio and faculty composition do not meet BAC guidelines, leading to overcrowded classes and insufficient individual attention for students.
12. **Criterion 8-1: Lack of Capacity-Based Student Enrolment Policy** - The absence of a clear policy for aligning student enrolment with infrastructure and faculty capacity leads to over-enrolment, straining resources and compromising education quality.
13. **Criterion 10-2: Inadequate Feedback Management System** - The lack of a formal and properly maintained feedback system leads to missed opportunities for improvement and unresolved grievances, affecting morale and departmental effectiveness.

#### **Opportunities:**

1. **Criterion 4-9: Integration of Practical Applications** - Integrating internships, projects, dissertations, and fieldwork into the curriculum enhances hands-on skills and real-world insights, increasing students' employability.
2. **Criterion 8-4: Improvement of Laboratory and Equipment** - Increase the number and quality of laboratories and equipment to support advanced learning and research.
3. **Criterion 9-4: Encouragement of Intellectual Contributions** - Promoting research activities like publications and patents elevates the department's academic reputation, fostering innovation and attracting research funding.
4. **Criterion 10-4: University-Industry Collaboration** - Strengthening industry collaborations ensures curriculum relevance to market demands, enhancing students' career-oriented experiences and employability.

#### **Threats:**

1. **Criterion 7-1: Loss of Trained Faculty Members** - Frequent loss of trained faculty members each semester, leading to a disruption in continuity and quality of education

2. **Criterion 7-2: Absence of Faculty and Staff Motivation** - Challenges in maintaining high levels of motivation among faculty and staff.
3. **Criterion 7-6: Time Constraints for OBE, Research, and Other Activities** - Faculty workload management issues leading to insufficient time for Outcome-Based Education (OBE), research, and other essential activities.
4. **Criterion 9-2: Dependency in Collaborative Research** - Dependency on external partnerships for collaborative research poses a threat if these relationships become unstable or misaligned with the department's goals, potentially disrupting research focus and progress.
5. **Criterion 9-3: Risks in Disseminating Research Findings** - Broad dissemination of research findings risks intellectual property issues and may push researchers towards short-term outputs over long-term impactful studies, possibly diluting academic integrity.

### E. Strategic Targets

The following table contains the Strategic targets with deadlines and required measures:

Srl	Targets	What is to be done	To be completed by
<b>T1</b>	Recruit and retain experienced faculty members	Develop competitive salary packages and benefits, establish a supportive work environment, offer professional development opportunities, and implement a structured career progression plan to attract and retain top talent.	2026
<b>T2</b>	Foster ongoing collaborative research initiatives	Create strategic partnerships with academic institutions, industry leaders, and government bodies. Establish research grants and joint projects, organize collaborative workshops, and provide incentives for faculty participation in interdisciplinary research.	2026
<b>T3</b>	Implement measures to protect intellectual property	Develop and enforce robust intellectual property policies, provide training on IP rights, establish a dedicated IP management office, and ensure proper documentation and registration of innovations and research outputs.	2027
<b>T4</b>	Adopt and uphold class size policy	Review and revise class size policies to align with educational best practices and guidelines. Implement a monitoring system to ensure adherence to the policy and adjust resources and staffing as needed to maintain optimal class sizes.	2026
<b>T5</b>	Development of OBE curriculum and reformation of program	Regular upgrade the Outcome-Based Education (OBE) curriculum by defining clear learning outcomes, integrating them into program design, and aligning assessment methods with these outcomes. Regularly	2025

		review and update the curriculum based on feedback and industry needs.	
<b>T6</b>	Provide consistent student counselling, mentoring, and tutoring	Implement tutorial class, help struggle students, prepare Policy for capacity based student enrolment, pursue students.	2027
<b>T7</b>	Introduce an effective admission policy	Develop a clear and transparent admission policy based on merit and alignment with program goals. Regularly review and update the policy to ensure it meets current academic and industry standards and effectively assesses prospective students.	2026
<b>T8</b>	Enhance the feedback management system	Implement a comprehensive feedback management system that allows for timely and effective collection, analysis, and response to feedback from students, faculty, and stakeholders. Utilize technology to streamline feedback processes and track resolutions.	2028
<b>T9</b>	Develop a tracking system for theses, projects, and internships	Create an integrated digital tracking system to monitor the progress and outcomes of theses, projects, and internships. Ensure the system is accessible to all stakeholders and provides real-time updates and evaluations.	2028
<b>T10</b>	Increase research funding	Seek additional funding sources through grants, partnerships, and donations. Enhance grant writing capabilities, develop a fundraising strategy, and engage with potential sponsors and funding agencies to secure increased financial support for research activities.	2027
<b>T11</b>	Continuously improve university-industry collaboration	Strengthen existing partnerships and seek new opportunities for collaboration. Organize joint events, internships, and research projects with industry partners. Regularly review and assess the effectiveness of collaborations and adapt strategies as needed.	2028
<b>T12</b>	Regularly monitor and maintain lab equipment	Establish a routine maintenance schedule for all laboratory equipment. Implement a system for regular checks, repairs, and updates to ensure equipment is functioning optimally and meets current technological standards.	2025
<b>T13</b>	Increase contribution to research and publications	Encourage faculty and students to engage in research activities and publish their findings. Provide support for research initiatives, including resources, training, and time allocations. Recognize and reward contributions to enhance motivation and productivity.	2026
<b>T14</b>	Introducing micro-credentials for	Identify the skills and competencies that are in high demand in the software engineering	2027



	student professional development	industry (e.g., programming languages, software development methodologies, cybersecurity, data science, etc.). Align micro-credentials with recognized industry certifications (e.g., AWS Certified Developer, Microsoft Certified: Azure Developer, etc.). Integrate real-world, industry-relevant projects as part of micro-credential assessments, where students can demonstrate their applied skills.	
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## F. Year-Wise Activity Plan

The following table contains year wise activity plan for the targets.

Year	Qtr	Activities to meet the targets	
Year 1	Jan-Mar	T1	Develop competitive salary packages and benefits
		T1	Establish a supportive work environment
		T1	Market Salary study
		T3	Develop and enforce robust intellectual property policies
		T6	Hire dedicated staff to manage and deliver counselling, mentoring, and tutoring services.
	Apr-Jun	T2	Create strategic partnerships with academic institutions, industry leaders, and government bodies.
		T2	Actively participate in conferences, workshops, and seminars to build relationships with potential collaborators.
		T3	provide training on IP rights
		T6	Implement tutorial class
	Jul-Sep	T1	Offer professional development opportunities
		T5	Provide faculty with ongoing training and support in OBE principles and practices.
		T7	Develop a clear and transparent admission policy based on merit and alignment with program goals.
		T12	Establish a routine maintenance schedule for all laboratory equipment. Implement a system for regular checks, repairs, and updates to ensure equipment is functioning optimally and meets current technological standards.
		T14	Introducing micro-credentials for student professional development
	Oct-Dec	T2	Establish research grants and joint projects, organize collaborative workshops, and provide incentives for faculty participation in interdisciplinary research.
			Establish research grants and joint projects, organize collaborative workshops, and provide incentives for faculty participation in interdisciplinary research.
		T3	Establish a dedicated IP management office

		T7	Regularly review and update the policy to ensure it meets current academic and industry standards and effectively assesses prospective students.
		T13	Encourage faculty and students to engage in research activities and publish their findings. Provide support for research initiatives, including resources, training, and time allocations. Recognize and reward contributions to enhance motivation and productivity.
<b>Year 2</b>	<b>Jan-Mar</b>	T1	Develop partnerships with industry to offer joint appointments, sabbaticals, or consulting opportunities to faculty members.
		T3	Partner with legal firms specializing in IP to offer guidance and support at reduced rates or through pro bono services.
		T2	Establish research grants and joint projects, organize collaborative workshops, and provide incentives for faculty participation in interdisciplinary research.
	<b>Apr-Jun</b>	T4	Review and revise class size policies to align with educational best practices and guidelines. Implement a monitoring system to ensure adherence to the policy and adjust resources and staffing as needed to maintain optimal class sizes.
		T10	Seek additional funding sources through grants, partnerships, and donations.
		T14	Introducing micro-credentials for student professional development
	<b>Jul-Sep</b>	T5	Establish mechanisms for continuous feedback and improvement during the transition to OBE.
		T6	Help struggle students,
	<b>Oct-Dec</b>	T1	Implement a structured career progression plan to attract and retain top talent
		T3	Apply for in
		T6	Conduct awareness campaigns to inform students of the available services and how to access them.
		T14	Introducing micro-credentials for student professional development
<b>Year 3</b>	<b>Jan-Mar</b>	T5	Regular upgrade the Outcome-Based Education (OBE) curriculum by defining clear learning outcomes, integrating them into program design, and aligning assessment methods with these outcomes. Regularly review and update the curriculum based on feedback and industry needs.
	<b>Apr-Jun</b>	T6	Prepare Policy for capacity based student enrolment, pursue students.

	<b>Jul-Sep</b>	T8	Implement a comprehensive feedback management system that allows for timely and effective collection, analysis, and response to feedback from students, faculty, and stakeholders.
		T10	Enhance grant writing capabilities, develop a fundraising strategy, and engage with potential sponsors and funding agencies to secure increased financial support for research activities.
	<b>Oct-Dec</b>	T3	ensure proper documentation and registration of innovations and research outputs.
		T9	Create an integrated digital tracking system to monitor the progress and outcomes of theses, projects, and internships.
<b>Year 4</b>	<b>Jan-Mar</b>	T11	Strengthen existing partnerships and seek new opportunities for collaboration.
	<b>Apr-Jun</b>	T11	Organize joint events, internships, and research projects with industry partners.
	<b>Jul-Sep</b>	T9	Ensure the system is accessible to all stakeholders and provides real-time updates and evaluations.
	<b>Oct-Dec</b>	T8	Utilize technology to streamline feedback processes and track resolutions.
		T11	Regularly review and assess the effectiveness of collaborations and adapt strategies as needed.