

DELTA UNIVERSITY

FACULTY OF POSTGRADUATE STUDIES

Policy on Interdisciplinary Science and Research (ISR)

Delta University for Science and Technology

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Policy Number: DU-ISR-2025-01

Effective Date: January 2025

Approving Authority: University President & Board of Trustees

Applies To: All Faculties, Research Centers, Faculty Members, and Students at Delta University.

Article 1: Purpose and Strategic Alignment

1.1 Aligned with Egypt Vision 2030 and the United Nations Sustainable Development Goals (SDGs), Delta University recognizes that resolving the complex crises of the modern world requires transcending traditional academic boundaries.

1.2 The purpose of this document is to formally institutionalize, govern, and financially incentivize Interdisciplinary Science and Research (ISR) across all educational and operational levels.

1.3 This policy establishes the Faculty of Graduate Studies for Advanced Interdisciplinary Science Studies (FGSAIS) as the central coordinating hub for boundary-crossing research, ensuring that our academic ecosystem systematically drives genuine societal, economic, and technological impact.

Article 2: Institutional Governance and the Dual-Track System

2.1 The university officially designates the FGSAIS as the central governing and administrative hub for all cross-faculty initiatives. To foster university-wide synergy while maintaining the rigor of foundational sciences, all postgraduate research protocols are governed by a Dual-Track registration system.

2.2 The Premium Interdisciplinary Track: Postgraduate candidates across all faculties may submit cross-disciplinary research protocols. These protocols are evaluated using the Interdisciplinary Integration Score (IIS), measuring disciplinary distance and methodological blending.

2.3 Mandatory Joint Supervision: Protocols qualifying for the Premium Track (IIS ≥ 3.5) must feature a supervisory committee comprising faculty members from at least two fundamentally distinct scientific disciplines (e.g., Artificial Intelligence and Clinical Medicine).

2.4 Deans' KPIs: The performance of Faculty Deans is continuously evaluated based on their "Joint Supervision Index"—the percentage of their faculty's active theses co-supervised with other university colleges

Article 3: Performance Measurement, Strategic Foresight, and Data Auditing

3.1 Traditional publication counts are deemed insufficient for measuring interdisciplinary impact. All ISR outputs shall be rigorously evaluated using the proprietary **DELTA-IMPACT 1.0 Framework**. The University research office is mandated to audit performance annually based on the framework's core pillars: Pre-Execution Synergy, SDG Semantic Mapping Score, and Economic Translation.

3.2 Strategic Foresight & Emerging Horizon Targeting: The university utilizes AI-driven bibliometrics to ensure our interdisciplinary outputs lead the global scientific frontier. Researchers are directed to utilize the Clarivate Research Horizon Navigator (RHN) to build their studies upon high-growth **"Core Papers"**.

3.3 I-Index & FWCI Standards: The university mandates a target Interdisciplinarity Index (I-Index) of ≥ 0.55 for collaborative projects and strives to maintain an interdisciplinary Field-Weighted Citation Impact (FWCI) well above the global average.

3.4 SDG Mapping: All interdisciplinary research outputs must be semantically mapped to at least two UN Sustainable Development Goals to ensure direct societal relevance.

Article 4: Financial Incentives, Tenure, and Research Funding

4.1 The university commits sustainable, high-level financial resources to prioritize cross-disciplinary research over isolated, single-discipline studies.

4.2 Tenure and Promotion: The University Promotion Committee formally recognizes interdisciplinary publications, cross-faculty grants, and joint-supervision achievements as highly distinguished criteria for career advancement and tenure.

4.3-Tiered Financial Publication Bylaw (2023): Based on the official university publication incentives bylaws, financial bonuses are allocated progressively for research papers published in Q1/Q2 global journals:

- *Tier 1 (Base):* 10% bonus for publications involving a multidisciplinary team from different faculties.

- *Tier 2 (Expanded):* 20% bonus for publications involving exactly four different faculties.
- *Tier 3 (Premium):* 30-40% strategic bonus multiplier for high I-Index (Q1) papers affiliated with the FGSAIS.

4.4 Interdisciplinary Reward Allocation Rate (IRAR): The Financial Affairs department will continuously audit the IRAR, the exact percentage of the university's total publication budget spent exclusively on interdisciplinary bonuses, as concrete evidence of the institution's financial commitment.

4.5 The Mohamed Rabie Nasser Award: The Board of Trustees mandates the annual allocation of exceeding **1.25 million EGP** to the "Mohamed Rabie Nasser Award for Scientific Research." This award is strategically designated to fund highly applied, interdisciplinary sciences (e.g., AI, Nanomedicine, Sustainable Energy) for researchers across Egypt and the Arab region, reinforcing the university's role as a regional funding powerhouse.

Article 5: Shared Infrastructure and Resource Prioritization

5.1 Interdisciplinary research teams are granted apex priority status for university resources. All cross-faculty teams are granted priority access to the university’s shared facilities, including the Central Interdisciplinary Research Laboratory the Genetics Research units, the Nanomedicine Research Unit, and the Center of Urban Excellence, etc.

5.2 Central Unit Alignment: Grant proposals projecting that more than 60% of their practical execution will occur inside these shared interdisciplinary facilities

are granted absolute priority for university funding, expedited procurement, and dedicated operational hours.

5.3 The university mandates that central shared facilities maintain global quality assurance standards. Facilities must sustain international accreditations (e.g., ISO/IEC 17025:2017) to ensure commercial-grade reliability for cross-disciplinary engineering and environmental research.

Article 6: Educational Integration (Undergraduate to Postgraduate Pipeline)

6.1 Interdisciplinary science is a foundational requirement of the undergraduate curriculum and is not restricted to postgraduate levels. The university actively supports and funds full undergraduate degree programs that bridge academic domains, including Bioinformatics, Mechatronics Engineering, and Applied Health Science Technologies, etc.

6.2 Mandatory Capstone Integration: All faculties (STEM, Medical, and Humanities) must integrate interdisciplinary methodologies into final-year graduation projects. Approved projects must demonstrate a clear intersection of at least two disciplines (e.g., Clinical Care and Artificial Intelligence; Mass Communication and Environmental Sustainability).

6.3 Pedagogical Innovation: Foundational science courses must progressively transition to problem/scenario-based, SDG-aligned problem-solving frameworks, utilizing models such as the "Engineer’s Journey."

6.4 Pipeline Tracking: The university shall systematically track the "Undergraduate Pipeline Transition Rate", the percentage of undergraduate

students who transition into advanced interdisciplinary postgraduate programs or targeted industrial employment within 12 months of graduation.

Article 7: Administrative Support, Industrial Synergy, and Societal Translation

7.1 Academic research governed by this policy must be engineered to translate into tangible societal or economic value.

7.2 Dedicated Project Management & TTO: Specialized administrative coordinators assist cross-faculty teams in managing joint budgets, securing ethical approvals, and protecting intellectual property through the Technology Transfer Office (TTO).

7.3 Staff Capacity Building & Global Alliances: The administration funds training programs for academic staff to learn interdisciplinary methodologies (e.g., integrating Law, Economics, and Engineering) and actively sponsors faculty members appointed to national and international interdisciplinary boards (e.g., the ITD Alliance Network).

7.4 The Industrial Advisory Board: Interdisciplinary research agendas must be periodically audited and updated in direct consultation with the Industrial Advisory Board, ensuring alignment with B2B industrial contracts and market demands.

7.5 Commercial Spin-offs: The University Innovation Hub is legally mandated to provide incubation space, legal counsel, and business support to transition successful interdisciplinary prototypes into viable commercial start-ups and industry-ready applications.

Approval and Ratification:

This policy is hereby ratified and effective immediately upon signature.

Prof. Dr. Yehia El-Mashad

President, Delta University for Science and Technology

Dr. Mohamed Rabie Nasser

Chairman of the Board of Trustees