B M Nazib Saad

Final-Year Textile Engineering Student · Seeking research-based MSc opportunities for Fall 2027

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RESEARCH INTERESTS

Smart Textiles • Functional Finishing • Advanced Materials • Sustainable Wet Processing

EDUCATION

Khulna University of Engineering & Technology (KUET) — B.Sc. in Textile Engineering — Khulna, Bangladesh | 2023 – 2027 (Expected) · not yet graduated

Major in Wet Processing Engineering. Focus on smart, functional, and sustainable textile finishes.

Relevant Coursework:

Wet Processing Engineering I–IV | Polymer Engineering | Textile Testing I & II | Technical Textiles

Dhaka City College — Higher Secondary Certificate (HSC) — Dhaka, Bangladesh | 2019 – 2021

UNDERGRADUATE THESIS (PLANNING COMPLETE; EXPERIMENTS PLANNED NOV 2026 – MAR 2027)

Development of Fatty Acid Eutectic Phase Change Material Coated Cotton Fabrics Using Chitosan Binders for Thermal Comfort and Wash Durability — Nov 2026 – Mar 2027

Supervised by Joy Sarkar, Assistant Professor, Dept. of Textile Engineering, KUET

- **Question:** Can a chitosan-bound lauric–myristic acid PCM coating retain thermal response after washing?
- **Status:** Planning complete; experimental work planned for November 2026–March 2027.
- **Planned methods:** Planned tests: DSC, TGA, FTIR, SEM, water vapour and air permeability, and laundering at 0, 5, 10, 20 and 30 cycles. Thesis details.

SELECTED LABORATORY PROJECTS

Natural Dyeing with Turmeric on Cotton — TE 4105 Sessional · 2026

Dyed cotton with turmeric and lemon juice in a coursework trial; observed yellow coloration. Dye uptake, fastness and antibacterial activity were not measured.

Extraction of Natural Dye from Henna Leaves — TE 4105 Sessional · 2026

Carried out aqueous extraction of crushed henna leaves at 90°C and filtered the resulting dye solution. The extract's chemical composition was not measured.

RESEARCH EXPERIENCE & INDUSTRIAL EXPOSURE

Independent Literature Review — Nanoparticle Finishing — KUET | 2026 – Present

Reviewed published work on nanoparticle-based antibacterial and UV-protective finishes, with a focus on laundering durability.

Industrial Exposure Visits — Textile Manufacturing & Wet Processing — Gazipur & Dhaka, Bangladesh | 2025

Department-organized visits observing commercial spinning, weaving, continuous dyeing, printing ranges, and industrial effluent treatment plants (ETP), bridging lab theory with industrial practice.

LEADERSHIP & EXTRACURRICULAR ACTIVITIES

Assistant Organizing Secretary — Cyborg (Cyber Gaming Club of KUET) — 2024 – Present

Coordinated inter-departmental tournaments, logistics, and communications for university-wide student activities.

Participant — Biz Bash 3.0 Case Competition — KUET | 2023

Collaborative strategic problem-solving and business case presentation.

CERTIFICATIONS & HONORS

- **Data Analysis with Python** (2026) — Online-course certificate; not presented as project proficiency.
- **International Environment Policy, Green Education, Leadership & Communication** (2025) — Specialized training on global environmental policy and sustainability.
- **Champion, Intra-University Indoor Sports (Carrom) Competition** (2025) — Khulna University of Engineering & Technology (KUET).

RELEVANT SKILLS

- **Coursework-based wet processing and natural dyeing:** Turmeric-on-cotton sessional; visual coloration observed.
- **Natural dye extraction:** Aqueous henna-leaf extraction and filtration in TE 4105.
- **Textile material identification and sample collection:** Collected five natural fiber types and hand-wove a small jute swatch.
- **Literature review:** Reviewed published work on nanoparticle finishing and enzymatic scouring.
- **Laboratory report writing and research presentation:** Coursework documentation and case-competition presentation.

Languages: Bengali (native), English (fluent).