

Debjani Goswami (SFHEA)
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Professional Summary:

Experienced and committed Teaching Fellow with over 20 years of experience in engineering and physics education across UK and international contexts. Demonstrated excellence in curriculum design, assessment leadership, pedagogical innovation, and mentoring. A Senior Fellow of the Higher Education Academy (SFHEA) and Member of the IET (MIET), with an established record of leadership in teaching enhancement, student engagement, and applied educational research.

Current Role (Aston University):

Teaching Fellow, School of Engineering & Physical Sciences (2014–present)

- Module Leader: Applied Physics (Engineering Foundation) and Physical Science and Engineering Foundation II
 - Co-Leader: Electromechanical Principles (Level 4, Aston Professional Engineering Course)
 - Deputy Programme Director – Engineering Foundation Year
 - Teaching Excellence Framework (TEF) Lead
 - Assessment Lead and College Scrutineer
 - Co-Leader, Assessment & Feedback Subgroup, Education and Professional Practice Research (EPPR) Group
- Key contributions include leading curriculum redesign, enhancing AI-informed assessment, mentoring new staff, and driving cross-disciplinary collaboration on pedagogical research.

Qualifications:

- PhD (ongoing) – Electronics & Biomedical Engineering, Aston University (Expected 2026)
- MTech (Electronics & Microwave Engineering) – Burdwan University, India (1997)
- MSc (Physics with Electronics) – Jadavpur University, India (1994)
- BSc (Physics Honours) – Burdwan University, India (1991)
- BEd (Bachelor of Education) – Burdwan University, India (1995)
- PGCert in Learning & Teaching in HE – Aston University (2015)
- PGDip in Learning & Teaching in HE – Aston University (2016)
- DTLLS (Diploma in Teaching in Lifelong Learning Sector) – University of Worcester (2014)
- ILM Certificate in Leadership & Management – Aston University (2018)
- Diploma in Electric Vehicle Technology (DipEV) – NPTEL, India (2021)

Teaching Experience (Summary):

Over 20 years of experience teaching Physics, Mathematics, and Electrical & Electronic Engineering at foundation, undergraduate, and postgraduate levels.

Aston University (2014–present): Lead modules in applied physics and engineering foundations (Level 3–4). Co-deliver Electromechanical Principles for degree apprentices. Internal moderator and assessor across multiple STEM modules. Supervise and mentor teaching assistants and early-career academics.

Previous Academic Roles:

- Subject Leader in Engineering, Cambridge Education Group / Coventry Foundation Campus (2009–2014)
- Lecturer in Electrical & Electronics Engineering, Pembrokeshire College, UK (2008–2009)
- Lecturer in Electronics, Mahatma Gandhi University, Dubai (2005–2007)

Leadership & Academic Citizenship:

Deputy Programme Director – Foundation Year Engineering: Oversight of programme delivery, assessment standards, and student support.

TEF Lead: Led peer observation cycles and initiated 'Sharing Good Practice' sessions across College. Promoted innovative teaching, community learning, and cross-department collaboration.

Mentorship: Mentored 10+ colleagues, including new Teaching Fellows and Teaching Assistants. Supported PhD demonstrators in developing teaching portfolios and HEA applications.

External Engagement:

External Examiner: University of Warwick (current), Royal Holloway University of London (current). Former moderator/examiner for GCSE and A-Level Physics (Edexcel, AQA, IB, Cambridge International, 2014–2021).

Outreach & Public Engagement: Delivered STEM workshops through AUEA, UniFest, Girls into Electronics, and Aston Open Days. Regular school outreach at Perry Hill Academy (since 2019). Active participant in student clearing and recruitment events.

Pedagogical Research Interests:

AI and Academic Integrity in STEM Education; Foundation Year Student Engagement and Belonging; Assessment and Curriculum Design; Problem- and Project-Based Learning Approaches.

Research Experience

Current: Carbon Nanotube Field Effect Transistors (CNTFETs) – Electrical Characterisation (Aston University).

2019–2020: Design of Switched and Synchronous Reluctance Motors (Aston University)

1997–1999: Senior Research Fellow, Jadavpur University – Published two conference papers.

Awards & Recognition:

Award-winning Foundation Year Team Member, Aston University (2025)

Best Presenter, International Conference on Future Education (2022)

Most Commendable Lecture, Aston Women in Business (2017)

Professional Memberships:

- Senior Fellow, Higher Education Academy (SFHEA)
- Member, Institution of Engineering and Technology (MIET)
- Member, Foundation Year Network (FYNAC)
- Member, Education Research Network UK & Ireland (EERN)

Selected Modules Taught (2014–present):

Since joining Aston University, I have taught and led a wide range of modules including:

- Physical Science and Engineering Foundation (Level 3) – Module Lead (2014–present)
- Physical Science and Engineering Foundation II (Level 3) – Module Lead (2018–present)
- Physics for Health Scientists (Level 3) – Module Lead (2016–present)
- Electromechanical Principles (Level 4) – Co-Owner and Lecturer (2021–present)
- Mechanics for Engineers (Level 4) – Lecturer (2017–2018)
- MATLAB Programming for Engineers (Level 4) – Lecturer (2014–2016)
- Introduction to Engineering & Applied Science (Level 3) – Module Lead (2014–2016)

Oral Presentation :

1. Goswami D (2022) “Reflection on how the Physics project work promotes students’ engagement and deeper learning during the term” oral presentation at the Foundation Year Network Conference, 11-12 July 2022, Birmingham, UK - power point presentation is available at <https://foundationyear.ac.uk/annual-conference-2021/> (oral presentation)
2. Goswami D, Broadbent R (2022), “Innovation of assessment delivery during a pandemic in a large physical science and engineering module” Proceedings on the 5th International Conference of Future Education, 16-17 June 2022, virtual conference - power point presentation is available at <https://futureofedu.co/> (oral presentation)
3. Goswami D (2022), “Innovation of Learning Environment and Classroom Techniques during Covid” Proceeding on the 5th International conference of future education, June 2022, 16-17 June 2022, virtual conference - power point presentation is available at <https://futureofedu.co/> (oral presentation)
4. Goswami D, Broadbent R (2021) “Staff experiences of planning and delivering Hy-Flex practical session within a foundation year Physical Science and Engineering Module” [power point presentation] Available at: <https://sites.google.com/sheffield.ac.uk/neer-summer21/>.