Why Pursue a MAS or PhD in Data Science at MBUST?

If you want to master data science — not just learning tools, but generating insights that matter — then the Graduate Program in Data Science at MBUST is for you. This is not a "surface-level" data science degree.

Data Science with Purpose — From Insights to Impact

"We don't just train data scientists. We train systems thinkers who understand the power and responsibility of data — and use it to build a better world."

- ✓ SDG-aligned research projects
- ✓ Community-engaged problem solving
- ✓ Ethical data practices at the core
- ✓ Impact measured by societal benefit

7 Key Pillars of Excellence

01
Strong Foundations. Real Applications.

- **Foundations:** ML, Deep Learning, Analytics, Data Engineering
- **Domains:** Agriculture, Health, IoT, Tourism, Social Media, Cybersecurity

02
Data Science with Purpose

- Research aligned with SDGs
- People-centered innovation
- Responsible DS: ethics & fairness
- Building for communities, not just markets

03
Hands-On & Research-Oriented

- Group projects before thesis

04
Advanced Global Topics

- Generative AI & Diffusion Models

- Ethics & fairness case studies
- Entrepreneurship & leadership training
- Scientific communication skills

- Bayesian Machine Learning
- Graph & Network Analysis
- AI-enabled Early Warning Systems

For Nepal's Ecosystem

05

- Strengthens national talent pipeline
- Focus on digital innovation & growth
- Data science as essential infrastructure

Rigorous but Structured

06

- Clear academic roadmap
- Core → Electives → Thesis
- Practical milestones at every stage

Beyond Technical Skills — Systems Thinkers

07

- Entrepreneurship & Leadership
- Development Policy
- Scientific Communication
- Research Review & Critical Thinking

Program Structure

Feature	MAS (Master of Applied Science)	PhD (Doctor of Philosophy)
Duration	2 Years	3 Years
Coursework & Electives	20+ credits	20+ credits
Thesis Credits	30 credits	50 credits
Practical Components	Group Projects	Group Projects
Research Focus	Applied Research	Advanced Research

MBUST views data science not as hype, but as essential infrastructure for national development, digital innovation, and research-led growth. The program strengthens Nepal's data science ecosystem by producing skilled scientists, engineers, entrepreneurs, and researchers ready to lead innovation globally.

Career Outcomes

📊 **Data Scientists & ML Engineers**

🤖 **AI Consultants & Researchers**

💼 **Data Analytics Specialists**

🚀 **Tech Entrepreneurs**

🎓 **Future PhD Candidates**

🌍 **Policy Analysts**

Banking • Healthcare • Agriculture • Tourism • Telecom • Academia • Cybersecurity

Who Should Apply?

✅ Has strong foundations in mathematics and programming

✅ Wants to design real-world data-driven solutions

✅ Cares about ethical and societal impacts of technology

✅ Aspires to lead data science initiatives in Nepal or globally

Madan Bhandari University of Science and Technology

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