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**Invitation of Applications for Admission to**

**Master of Applied Science and PhD Programs**

**June 11, 2025**

# **Introduction**

Madan Bhandari University of Science and Technology (MBUST) was established through the promulgation of the Madan Bhandari University of Science and Technology Act, 2079 (2022 AD) on August 3, 2022. This Act grants extensive autonomy to the University creating an enabling environment for developing MBUST into a world-class research-oriented university. MBUST holds the promise of making a direct contribution to the economic development of the country through the creation of new knowledge and technology, which should enhance the competitiveness of the country's economy.

The MBUST ***vision is to be a world-class university*** and the ***mission is to build prosperous and just Nepal***. MBUST is committed to provide world-class education by attracting talented and committed students and academic staff, and providing a conducive environment for research and development activities focused at solving real-life problems of the industry using the state-of-the- art knowledge and technology.

1. **Academic Programs**

The teaching and research activities of the University are guided by the real-life problems of the industry. Teaching and research programs of the University are delivered through the Institutes engaged in research related to specific economic sectors. The students will pursue their study in close collaboration with related industries and are expected to develop a new technology for collaborating industrial partners. This approach is designed to produce graduates who are "job creators" rather than "job seekers".

MBUST has been offering PhD and Master of Applied Science (MAS) programs in Organic Agriculture, Forest Biomaterials Science and Engineering, and MAS programs in Artificial Intelligence, Data Science and Sustainable and Resilient Infrastructure.

Academic programs to be offered in November 2025 session are PhD in Organic Agriculture, Forest Biomaterials Science and Engineering and Artificial Intelligence and MAS in Organic Agriculture, Forest Biomaterials Science and Engineering, and Sustainable and Resilient Infrastructure.

Curriculum structures (Attachment[[1]](#footnote-1) 1) and lists of resource persons for various degrees (Attachment 2) are appended to this notice. Please visit [www.mbust.edu.np](http://www.mbust.edu.np) for more details.

1. **Programs, Intake and Financial Support**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Program** | **Total intake** | **Tuition fee waiver and scholarship[[2]](#footnote-2)** | **Tuition fee waiver only** | | | |
| **100%** | **75%** | **50%** | **25%** |
| PhD[[3]](#footnote-3) | | | | | | |
| Organic Agriculture | 2 | For up to 2 |  |  |  |  |
| Forest Biomaterials Science and Engineering | 2 | For up to 2 |  |  |  |  |
| Artificial Intelligence | 2 | For up to 2 |  |  |  |  |
| Sustainable and Resilient Infrastructure | 2 | For up to 2 |  |  |  |  |
| Master of Applied Science (MAS) | | | | | | |
| Organic Agriculture | Up to 16 | For up to 2 | For up to 2 additional students | For up to 2 additional students | For up to 2 additional students | For up to 8 additional students |
| Forest Biomaterials Science and Engineering | Up to 16 | For up to 2 | For up to 2 additional students | For up to 2 additional students | For up to 2 additional students | For up to 8 additional students |
| Sustainable and Resilient Infrastructure | Up to 16 | For up to 2 | For up to 2 additional students | For up to 2 additional students | For up to 2 additional students | For up to 8 additional students |

Monthly scholarship of **Rs. 20,000** and **Rs. 12,000** respectively may be provided to PhD students for 36 months and Master's students for 24 months based on scholastic performance subject to the *availability of resources* and *satisfactory performance*. Students getting fee waiver and/ or scholarships are required to be engaged in University’s research and other activities.

For getting tuition fee waivers and scholarships, Master's students will have to commit to be employed or self-employed in Nepal or serve at MBUST or institutions placed by the MBUST for at least two years. The duration of service will be half of the above for students getting only the fee waiver independent of the degree of the fee waiver. Similarly, PhD students, for getting tuition fee waivers and scholarships, will have to commit to be employed or self-employed in Nepal or serve at MBUST or institutions placed by the MBUST for at least three years. Students failing to meet these obligations shall be morally obliged to reimburse to the University the full amount of scholarship and fee waiver, at the value of Nepali Rupees at the time of their graduation, they have received within five years after the graduation.

If recipients of tuition fee waiver and scholarship leave the study before completion they will have to reimburse the total amount of scholarship received and pay tuition fees for the whole course.

1. **Cost of Study**

The tuition fees for one year is Rs.150,000 for both PhD and Master's programs. The University will bear the cost of laboratory consumables associated with the study. The students will be required to bear the cost of field work associated with their transportation and lodging. However, such costs may be borne by the University if such expenses can be financed by funding for the research from sponsors.

To encourage only committed students to get admitted and handle the University property with care, the following non-tuition fees will be charged: registration fee of Rs.25,000; refundable deposit of Rs.50,000, which will be refunded on completion of the study; and refundable security deposit of Rs.25,000 towards the compensation for possible damages to the University property associated with the negligence.

1. **Nature of Study**

The MAS programs are research-oriented. Both PhD and MAS programs require full-time attendance. Only those candidates who would be able to devote full-time for the study should apply. Students are not allowed to be engaged in part-time jobs.

For productive studies at the University students are advised to rent rooms at Chitlang. Almost all students stay at Chitlang. Limited paid seats are available for students who wish to commute to the University using the office shuttle service to and from Chitlang. But the seats are not guaranteed.

1. **Admission Schedule**

|  |  |
| --- | --- |
| **Date** | **Event** |
| June 11, 2025 | Call for applications |
| June 13 – July 4 | Application period |
| July 9 | Shortlist publication |
| July 13 - 16 | Written examinations and interview |
| July 22 | Publication of admission list |
| July 23 -30 | Admission period |
| November 23 | Orientation, course registration, and start of instruction |

**Applications may be submitted after the deadline also.** Applications received after the deadline till November 5, 2025 will be considered if all seats are not filled based on the applications submitted within the deadline. Financial assistance remaining unused after the admission under this notice will be available for students selected from the subsequent admission cycles. Interested students should bear in mind that the chances of availing the financial assistance would be higher for those who apply in response to this notice.

The supplementary Call for Applications with information about the admission schedule, remaining seats and financial assistance available for applications received after the deadline shall be published on August 2, 2025.

1. **Eligibility**

* Master's degree in Engineering/Technology/Science or other relevant fields from recognized universities with CGPA of 3.0/4.0 (or international equivalent) for PhD.
* Four-year Bachelor's in science/engineering/technology or other relevant fields from recognized universities with CGPA of 2.75 out of 4.0 (or international equivalent) for all MAS programs except Sustainable and Resilient Infrastructure.
* Four-year Bachelor's degree in / Engineering/ Technology/Science/Architecture from recognized universities with CGPA of 2.75/4.0 (or international equivalent) or Master's degree in Management, Economics, Sociology, and Tourism and Hospitality and other relevant fields with CGPA of 2.75/4.0 (or international equivalent) for MAS in Sustainable and Resilient Infrastructure program.

Research topics which may be offered to students are presented in Attachment 3. Particular qualifications and additional skills may be preferable for particular research topics, which will be considered while selecting students.

1. **Application Submission**

Online application form is available at <https://mbust.bbnepal.com/> and MBUST website <http://mbust.edu.np>. Applications must be submitted online. Applications are open to all nationalities. Applications in hard copies or scanned copies shall not be entertained.

***Bank details to deposit application fee:***

MADAN BHANDARI UNIVERSITY OF SCIENCE AND TECHNOLOGY

A/C No. 01800106701870000001

Nepal Bank Limited

Gabahal Branch, Lalitpur

**In case of difficulties in applying online, please contact:**

Name: Saroj Joshi

Email Id: [jsaroj284@gmail.com](mailto:jsaroj284@gmail.com)

Contact number: 9868795646

**For queries related to programs please contact:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Program/Degree | Name | Mobile | Email |  |
| OA | Dr. Bhushan Shrestha | 9810198318 | bhushan.shrestha@mbust.edu.np |  |
| FBMSE | Dr. Sabina Shrestha | 9841270278 | sabina.shrestha@mbust.edu.np |  |
| SRI | Dr. Kishor Timsina | 9849147792 | kishor.timsina@mbust.edu.np |  |
| AI | Dr. Rajib Subba | 9705048776 | rajib.subba@mbust.edu.np |  |

1. **Documents and Information to be Submitted**

**Mandatory documents**

1. Academic transcripts
   1. Bachelor's level
   2. Secondary school transcript (grade 12)
   3. Secondary Education Examination transcript (grade 10)
2. Research statement (Attachment 4)
3. Personal statement (Attachment 5)
4. Citizenship certificate/Passport
5. CV
6. Bank voucher/evidence of the deposition of application fee of Rs. 500

**Optional documents**

1. Publication list
2. Experience certificates
3. Additional transcripts
4. Other documents (not more than five)
5. **Selection of Students**

**Criteria for Selection**

The students will be selected based on the following criteria.

|  |  |
| --- | --- |
| **Criteria** | **Weightage, %** |
| Transcripts | 20 |
| Research statement | 10 |
| Personal statement | 15 |
| Special skills | 10 |
| References | 10 |
| Essay writing | 10 |
| Interview | 25 |
| **Total** | **100** |

Students should submit the names of three referees who can provide the firsthand reference on the students. The students should name only those referees who agree to be interviewed by the University.

Students are encouraged to submit documents showing special achievements/skills which could enhance the chances of their success in the studies.

Students with publication records in peer-reviewed journals and conferences will have an advantage in the selection. Therefore, students are encouraged to provide a list of publications (Attachment 6).

Essay writing and interview will take place at the University premises at Chitlang.

**Shortlisting**

Students will be shortlisted based on the cumulative score of the first five criteria. The number of students shortlisted will not exceed the double of the planned intake.

**Final selection**

The final selection for the admission will be based on the cumulative score of all criteria.

1. **Pledge**

The selected students shall be required to sign a pledge committing, among others, to complete the study, be employed or self-employed in Nepal or serve at the MBUST or an institution assigned by the MBUST in lieu of scholarship and fee waiver provided at the time of admission.

1. **Consultations**

Students will be able to consult relevant faculty members and administrative staff for any enquiries they have every working day at 4pm. They may join an online meeting using the link below.

Link: <https://teams.microsoft.com/l/meetup-join/19%3ameeting_YzUyMDI4ZTAtYzhlNi00ZDIyLWFlZjAtNTY1OTc0MjIyNDVk%40thread.v2/0?context=%7b%22Tid%22%3a%22886e4291-d795-4829-8c34-d2ce825102ad%22%2c%22Oid%22%3a%22b35aa0f7-2bc3-40bc-ac10-0ec622db9195%22%7d>

Meeting ID: 410 061 886 920

Passcode: NM6Bn3u7

**Director**

**Institute of Applied Sciences**

**Attachment 1**

**Curriculum Structure**

1. **Organic Agriculture**
   1. **PhD**

**Duration of the Course: 3 years**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Semester I** | | |  | **Semester II** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| OA-CR-501 | Soil Fertility and Soil Ecology in Organic Agriculture | 4 |  | OA-CR-550  Or  OA-CR-551 | Plant Protection in Organic Agricultural System  Or  Animal Production in Organic Agriculture | 4 |
| OA-CR-502 | Organic Agricultural Food Systems and Agroecology | 4 |  | GC-NC-550 | Entrepreneurship, Scientific Communication and Leadership (4 hours) | 0 |
| GC-CR-501 | Development Policy | 3 |  | OA-EL-561~571 | One course from the list related to thesis | 4 |
| GC-CR-502 | Research Methodology and Data Mining | 3 |  | OA-TH-999 | Thesis | 4 |
|  | | | | | | |
| **Semester III** | | |  | **Semester IV** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| OA-EL-561~571 | One course from the list related to thesis | 4 |  | OA-TH-999 | Thesis | 12 |
| OA-TH-999 | Thesis | 12 |  |  |  |  |
| OA-NC-601 | Technology Management (3 hours) | 0 |  |  |  |  |
|  | | | | | | |
| **Semester V** | | |  | **Semester VI** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| OA-TH-999 | Thesis | 11 |  | OA-TH-999 | Thesis | 11 |
|  | | | | | | |
| Total credit hours for thesis = 50; total credit hours for core and elective courses not less than 25. | | | | | | |

* 1. **MAS**

**Duration of the Course: 2 years**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Semester I** | | |  | **Semester II** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| OA-CR-501 | Soil Fertility and Soil Ecology in Organic Agriculture | 4 |  | OA-CR-550  Or  OA-CR-551 | Plant Protection in Organic Agricultural System  Or  Animal Production in Organic Agriculture | 4 |
| OA-CR-502 | Organic Agricultural Food systems and Agroecology | 4 |  | GC-NC-550 | Entrepreneurship, Scientific Communication, and Leadership (4 hours) | 0 |
| GC-CR-501 | Development Policy | 3 |  | OA-EL-561~571 | One course from the list related to thesis | 4 |
| GC-CR-502 | Research Methodology and Data Mining | 3 |  | OA-TH-699 | Thesis | 4 |
|  | | | | | | |
| **Semester III** | | |  | **Semester IV** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| OA-NC-601 | Technology Management (3 hours) | 0 |  |  |  |  |
| OA-TH-699 | Thesis | 13 |  | OA-TH-699 | Thesis | 13 |
|  | | | | | | |
| Total credit hours for thesis = 30; total credit hours for core and elective courses not less than 20. | | | | | | |

1. **Forest Biomaterials Science and Engineering**
   1. **PhD**

**Duration of the Course: 3 years**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Semester I** | | |  | **Semester II** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| FB-CR-501 | Fundamentals of Forest Biomaterials Science | 4 |  | FB-CR-550 | Advanced Topics in Sustainable Bioproducts | 4 |
| FB-CR-502 | Chemistry of Biomaterials | 4 |  | FB-TH-999 | Thesis | 4 |
| GC-CR-501 | Development Policy | 3 |  | GC-NC-550 | Entrepreneurship, Scientific Communication and Leadership (4 hours) | 0 |
| GC-CR-502 | Research Methodology and Data Mining | 3 |  | FB-NC-551 | Forest Conservation and Management (3 hours) | 0 |
|  |  |  |  | Elective I | One course from the list related to thesis | 4 |
|  | | | | | | |
| **Semester III** | | |  | **Semester IV** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| Elective II | One course from the list related to thesis | 4 |  | FB-TH-999 | Thesis | 12 |
| FB-TH-999 | Thesis | 12 |  |  |  |  |
|  | | | | | | |
| **Semester V** | | |  | **Semester VI** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| FB-TH-999 | Thesis | 11 |  | FB-TH-999 | Thesis | 11 |
|  | | | | | | |
| Total credit hours for thesis = 50; total credit hours for core and elective courses not less than 25. | | | | | | |

* 1. **MAS**

**Duration of the Course: 2 years**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Semester I** | | |  | **Semester II** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| FB-CR-501 | Fundamentals of Forest Biomaterials Science | 4 |  | FB-CR-550 | Advanced Topics in Sustainable Bioproducts | 4 |
| FB-CR-502 | Chemistry of Biomaterials | 4 |  | FB-TH-699 | Thesis | 4 |
| GC-CR-501 | Development Policy | 3 |  | GC-NC-550 | Entrepreneurship, Scientific Communication and Leadership (4 hours) | 0 |
| GC-CR-502 | Research Methodology and Data Mining | 3 |  | FB-NC-551 | Forest Conservation and Management (3 hours) | 0 |
|  |  |  |  | Elective I | One course from the list related to thesis | 4 |
|  | | | | | | |
| **Semester III** | | |  | **Semester IV** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| FB-TH-699 | Thesis | 13 |  | FB-TH-699 | Thesis | 13 |
|  | | | | | | |
| Total credit hours for thesis = 30; total credit hours for core and elective courses not less than 20. | | | | | | |

1. **Artificial Intelligence**
   1. **PhD**

**Duration of the course: 3 years**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Semester I** | | |  | **Semester II** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| AI-CR-501 | Machine learning | 3 |  | AI-CR-550 | Computer Vision | 3 |
| AI-CR-502 | Practical Data Science with Python | 2 |  | AI-CR-551 | Natural Language Processing | 3 |
| AI-CR-503 | Project in People-Centred AI | 2 |  | AI-EL-561~570 | Elective 1 | 2 |
| AI-CR-504 | Research Methods for intelligent Systems | 1 |  | GC-CR-501 | Development Policy | 3 |
| GC-NC-550 | Entrepreneurship, Scientific Communication and Leadership (4 hours) | 0 |  | AI-NC-553 | Case Studies in Ethics and Fairness in AI (1 hour) | 0 |
|  |  |  |  | AI-TH-699 | Thesis | 4 |
|  | | | | | | |
| **Semester III** | | |  | **Semester IV** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| AI-CR-601 | Advanced Topics in Deep Learning | 3 |  | AI-TH-699 | Thesis | 12 |
| AI-EL-561~570 | Elective II | 2 |  | AI-EL-561~570 | Elective III | 2 |
| AI-TH-699 | Thesis | 12 |  |  |  |  |
|  | | | | | | |
| **Semester V** | | |  | **Semester VI** | | |
| **Course Code** | **Course Title** | **Credit** |  | **Course Code** | **Course Title** | **Credit** |
| AI-TH-699 | Thesis | 11 |  | AI-TH-699 | Thesis | 11 |
|  |  |  |  |  |  |  |
|  | | | | | | |
| Total credit hours for thesis = 50; total credit hours for core and elective courses not less than 25. | | | | | | |

1. **Sustainable and Resilient Infrastructure Program**
   1. **PhD**

Duration of the Course: 3 years

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Semester I | | |  | Semester II | | |
| Course Code | Course Title | Credit |  | Course Code | Course Title | Credit |
| SRI-CR-501 | Sustainable and Resilient Development Principles and Practices | 3 |  | SRI-EL-xxx | Elective II | 3 |
| SRI-CR-502 | Fundamentals of Tourism | 3 |  | SRI-EL-xxx | Elective III | 3 |
| SRI-CR-503 | Research methodology and Data Mining | 3 |  | GC-NC-551 | Entrepreneurship, and Leadership | 0 |
| GC-NC-501 | Science Policy Communication | 0 |  | SRI-EL-xxx | Elective IV | 2 |
| SRI-EL-xxx | Elective I | 3 |  | SRI-TH-699 | Thesis | 4 Th |
|  | Total | 12CR (9Co+3El), 3hrNC |  |  | Total | 8Cr (8El), 4TH, 2hrNC |
|  | | | | | | |
| Semester III | | |  | Semester IV | | |
| Course Code | Course Title | Credit |  | Course Code | Course Title | Credit |
| SRI-EL-xxx | Elective V | 3 |  | SRI-EL-xxx | Elective VI | 3 |
| SRI-TH-699 | Thesis | 10 Th |  | SRI-TH-699 | Thesis | 10 Th |
|  | Total | 10 Th 3 El |  |  | Total | 10 Th  3 El |
| Semester V | | |  | Semester VI | | |
| Course Code | Course Title | Credit |  | Course Code | Course Title | Credit |
| SRI-TH-699 | Thesis | 13 Th |  | SRI-TH-699 | Thesis | 13 Th |
|  | Total | 13 Th |  |  | Total | 13 Th |
|  | | | | | | |
| Total credit hours for thesis = 50; total credit hours for core and elective courses not less than 25. | | | | | | |

* 1. **MAS**

Duration of the Course: 2 years

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Semester I | | |  | Semester II | | |
| Course Code | Course Title | Credit |  | Course Code | Course Title | Credit |
| SRI-CR-501 | Sustainable and Resilient Development Principles and Practices | 3 |  | SRI-EL-xxx | Elective II | 3 |
| SRI-CR-502 | Fundamentals of Tourism | 3 |  | SRI-EL-xxx | Elective III | 3 |
| SRI-CR-503 | Research methodology and Data Mining | 3 |  | GC-NC-551 | Entrepreneurship, and Leadership | 0 |
| GC-NC-501 | Science Policy Communication | 0 |  | SRI-EL-xxx | Elective IV | 2 |
| SRI-EL-xxx | Elective I | 3 |  | SRI-TH-699 | Thesis | 4 Th |
|  | Total | 12CR (9Co+3El), 3hrNC |  |  | Total | 8Cr (8El), 4TH, 2hrNC |
|  | | | | | | |
| Semester III | | |  | Semester IV | | |
| Course Code | Course Title | Credit |  | Course Code | Course Title | Credit |
| SRI-TH-699 | Thesis | 13 Th |  | SRI-TH-699 | Thesis | 13 Th |
|  | Total | 13 Th |  |  | Total | 13 Th |
|  | | | | | | |
| Total credit hours for thesis = 30; total credit hours for core and elective courses not less than 20. | | | | | | |

**Attachment 2**

**Resource Persons**

1. **Organic Agriculture**

| **No.** | **Name** | **Main Designation** | **Affiliation** | **MBUST Affiliation** | **Previous Affiliation** |
| --- | --- | --- | --- | --- | --- |
| 1 | Dr. Bhushan Shrestha | Associate Professor,  Program Coordinator | Madan Bhandari University of Science and Technology (MBUST) |  |  |
| 2 | Dr. Anupama Shrestha | Assistant Professor | MBUST |  |  |
| 3 | Dr. Rameshwar Rai |  |  | Visiting faculty member |  |
| 4 | Dr. Sarbesh Man Dangol | Assistant Professor | MBUST |  |  |
| 5 | Dr. Sabin Basi | Assistant Professor | MBUST |  |  |
| 6 | Prof. Kentaro Hosaka | Curator, Mycology | National Museum of Nature and Sciences, Japan | Thesis Co-supervisor, Visiting Professor |  |
| 7 | Prof. Park Duck Hwan | Professor |  | Thesis Co-supervisor, Visiting Professor |  |
| 8 | Dr. Bhaneswar Pokharel |  | Organic Agriculture Expert and organic farm proprietor | Visiting Faculty, Co-supervisor |  |

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| --- | --- | --- | --- | --- | --- |
| 9 | Dr. Mahesh Kumar Adhikari |  |  |  | Member-Secretary, National Academy of Science and Technology |
| 10 | Dr. Hom Nath Giri |  |  | Visiting faculty, Co-supervisor |  |
| 11 | Prof. Ananda Shova Tamrakar |  |  | Visiting Faculty and Co-Supervisor | Tribhuvan University |
| 12 | Dr. Hira Kaji Manandhar | Executive Chairperson | Nepal Plant Disease and Agro Associates Pvt. Ltd. | Chairperson, Advisory Group, Organic Agriculture Program, Visiting Faculty Member and Co-Supervisor |  |
| 13 | Dr. Samudra Lal Joshi |  |  | Visiting Faculty Memberand Co-Supervisor |  |
| 14 | Dr. Budhhi Ratna Khadge |  |  | Visiting Faculty Member and Co-Supervisor |  |

1. **Forest Biomaterials Science and Engineering**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Main Designation** | **Affiliation** | **MBUST Affiliation** | **Previous Affiliation** |
| 1 | Prof. Ning Yan | Full Professor | Department of Chemical Engineering and Applied Chemistry, University of Toronto, Canada | Forest Biomaterials Science and Engineering |  |
| 2 | Prof. Hom Nath Dhakal | Full Professor | Professor of Mechanical Engineering, University of Portsmouth, UK. Director of the Portsmouth Centre for Advanced Materials and Manufacturing | Honorary Chair of Sustainable Biomaterials |  |
| 3 | Dr. Bishnu Acharya | Associate Professor | Saskatchewan Ministry of Agriculture Chair in Bioprocess Engineering & Associate Professor Chemical and Biological Engineering, | Honorary Visiting Professor |  |
| 4 | Dr. Sabina Shrestha | Associate Professor | MBUST |  | Post-doctoral Fellow Kyung Hee University, S. Korea  Post-doctoral Fellow Jeju National University, S. Korea |
| 5 | Dr. Sudip Pandey | Assistant Professor | MBUST |  | Post-doctoral fellow in university of Padova, Research fellow in WSL, Zurich, Switzerland |
| 6 | Dr. Saurabha Bhattarai | Assistant Professor | MBUST |  | Research Fellow, Nepal Academy of Science and Technology |
| 7 | Dr. Kishor Timsina | Assistant Professor | MBUST |  | Coordinator, National Society of Earthquake Technology-Nepal |
| 8 | Dr. Jhashanath Adhikari Subin | Post-doctoral Fellow | MBUST |  | Post-doctoral Fellow, Research Center for Applied Science and Technology, Tribhuvan University |

1. **Digital Technology (Artificial Intelligence)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Main Designation** | **Affiliation** | **MBUST Affiliation** | **Previous Affiliation** |
| 1 | Prof. Suresh Manandhar |  | Wiseyak | Honorary Chair for Artificial Intelligence | Professor, University of York |
| 2 | Prof. Bishnu Prasad Gautam | Full Professor | Department of Applied Information Engineering, Suwa University of Science | Honorary Visiting Professor |  |
| 3 | Dr. Ved Prasad Kafle | Research Manager | National Institute of Information and Communications Technology, Japan; Visiting Professor, The University of Electro-Communications, Japan | Visiting Professor |  |
| 4 | Dr. Rajib Subba | Assistant Professor and Coordinator of DT Program | Digital Technology Program,  MBUST |  | Adjunct Associate Professor, University of Agder, Norway and Visiting Faculty, Westcliff University, USA |
| 5 | Dr. Ritu Raj Lamsal | Assistant Professor | Digital Technology Program,  MBUST |  |  |
| 6 | Dr. Rijan Maharjan |  | Phutung Lab | Adjunct Assistant Professor |  |
| 7 | Dr. Bhuwan Bhattarai |  | USA | Visiting Faculty Member |  |
| 8 | Dr. Manoj Acharya, |  |  | Visiting Faculty Member |  |
| 9 | Dr. Aamod Khatiwada, Computer Science, Microsoft, USA | Machine Learning Researcher | SRI, USA. | Visiting Faculty Member |  |
| 10 | Dr. Shree Krishna Acharya |  |  | Visiting Faculty Member |  |

1. **Sustainable and Resilient Infrastructure**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Main Designation** | **Affiliation** | **MBUST Affiliation** | **Previous Affiliation** |
| 1 | Dr. Netra Chhetri | Professor | Arizona State University’s School for the Future of Innovation in Society | Academic Council Member |  |
| 2 | Dr. Neel Kamal Chapagain | Professor | Centre for Heritage Management, Ahmedabad University |  |  |
| 3 | Dr. Kirti Kusum Joshi | Director | Institute of Applied Sciences, MBUST |  |  |
| 4 | Dr. Kishor Timsina | Asst. Professor | Madan Bhandari University of Science and Technology |  |  |
| 5 | Mr. Rabi Jung Pandey |  |  | Visiting Faculty Member |  |
| 6 | Dr. Chaitanya Krishna | Asst. Professor | Asian Institute of Technology (AIT) | Thesis Supervisor |  |

**Attachment 3**

**Thesis Topics**

1. **Organic Agriculture**
   1. **PhD**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Topic** | **Expected Output/Outcome** | **Preferred Academic Qualifications** | **Preferred Special Skills** |
| 1 | Lactic Acid Bacteria as a Potential Bio-pesticides and Bio-fertilizer | Development of organic fertilizer and pesticides |  | Data analysis Spss, R skill or related tools |
| 2 | Characterization of Microbial Diversity and Nutrient Content of Compost Prepared Using Local Resources | Development of more effective compost |  | Data analysis SPSS, R  Bioinformatics tools as Mega align |
| 3 | Use of multiplexed guided RNAs to develop blast-resistant rice crops | Blast resistance seed development |  |  |
| 4 | Microtuber production for enhanced potato plantation | Yield increase |  |  |
| 5 | Value chain development in kiwifruit | Increased production of kiwifruit |  | Agri-economics |

* 1. **MAS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Topic** | **Expected Output/Outcome** | **Preferred Academic Qualifications** | **Preferred Special Skills** |
| 1 | Characterization of phosphate solubilizing bacteria with anti *Ralstonia* effect | Soil improvement |  | Data analysis SPSS, R skill or related tools |
| 2 | Genetic Characterization of clubroot pathogens of Nepal | Development of biofertilizer |  | Data analysis SPSS, R skill or related tools |
| 3 | Plant Growth Promoting Effect of Rhizobacteria and Vermicompost in Different Vegetables | Development of biofertilizer |  | Data analysis SPSS, R skill or related tools |
| 4 | Isolation and characterization of nematode disease of Kiwi fruit | Increased in production of kiwi fruit |  | Data analysis SPSS, R skill or related tools |
| 5 | Socio-economics/ Effectiveness of CSA | Producer- Consumer linkages built |  | Socio-economics |
| 6 | Nutrition/ dynamics of organic farming on soil health and food quality | Nutrition enriched |  |  |
| 7 | Genetics/ Varietal development for organic production | Seeds for OA developed |  | Plant Breeding |
| 8 | Soil Science/ Soil and fertility mapping for precise nutrient management in Chitlang | Fertility improved |  |  |
| 9 | Production of polymerase enzymes in molecular research of agriculture | Import substitution |  |  |
| 10 | Using different light colors in optimal growth of Jumli Marshi | Productivity increase |  |  |
| 11 | Genetic transformation of potatoes cultivated in Nepal | Yield increase |  |  |
| 12 | Quality management of kiwifruit- impact of pruning(vines), thining (flowers/fruits) for quality and shelf life of kiwifruit | Increased production and marketing of Kiwi |  | Data analysis and manuscript writing |
| 13 | Initiation and development of floral primordia in kiwifruit | Increased production of Kiwi |  | Microscope handling |
| 14 | Post-harvest management and vase life of cut flowers | Increased income of the flower nursery grower |  |  |
| 15 | Biological control of disease for organic mushroom farming | Promotion of pesticide-free mushroom |  | Agriculture, plant pathology |
| 16 | Biological control of insect pests for organic mushroom farming | Promotion of pesticide-free mushroom |  | Agriculture,  Entomology |
| 17 | Post-harvest technology of cultivated mushrooms to enhance shelf-life | Increased marketing of fresh mushrooms |  | Agriculture, post-harvest technology |
| 18 | Optimization of substrate for higher yield of mushroom | Increased mushroom yield |  | Agriculture, microbiology |
| 19 | Application of mycorrhizal fungi to increase soil fertility and crop yield | Increased soil fertility, increased crop yield |  | Agriculture, soil science, plant |

1. **Forest Biomaterials Science and Engineering**
2. **PhD**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Topic** | **Expected Output/Outcome** | **Preferred Academic Qualifications** | **Preferred Special Skills** |
| 1 | Mechanical Characterization of Common Nepalese Timber Species and Performance Analysis (2 hardwood and 2 softwood species) | * Test the strength and durability of common timber species and their performance according to different climate | Engineering (structural, Mechanical), Wood Science, Forestry, Materials Science or Applied Physics (with Lab experience), Wood Science and technology | Basic knowledge on wood anatomical features and their identification, Knowledge on mechanical testing and instruments handling Laboratory skills on sample preparation would be advantageous Skills on R studio/Python, GIS, Remote sensing will be advantageous. |
| 2 | Sustainable Wool Alternative from Miscanthus nepalensis: A green innovation for Textile Industry | * Extract high-quality natural fibers from *Miscanthus nepalensis and evaluate* potential applications of the fibers as insulating materials. | Biotechnology, Chemistry, Forestry, Environmental Science, Microbiology Agriculture | Wet laboratory skills (for fiber extraction - i.e., Handling, biological, chemical and physical substances), Knowledge on statistical data and skills on R Studio |
| 3 | Phytochemical analysis of essential oils used in Ayurvedic aromatherapy and microencapsulation | * Quality essential oil seeking aromatherapy spa and export of essential oil from Nepal | Chemistry, Botany, Biotechnology, Microbiology, Agriculture | Phytochemical screening and chromatographic techniques |
| 4 | Characterization and separation of components of *Salvia rosmarinus* L. for bio-industrial (Food & Cosmetics) applications | * Identification of the chemotype of rosemary with high essential oil to promote its farming * Technology applicable for separation of antioxidant components for use as food preservatives.   Topical formulations of skin care products for skin pathogens | Chemistry, Botany, Microbiology, Agriculture, Biotechnology | Phytochemical chromatographic separation |
| 5 | Formulation and stability analysis of perfumes using aromatic extracts of Nepalese herbal materials | * Hydro distilled essential oils are exported from Nepal but their use in perfume production in industrial scale in Nepal is lacking * Production of perfume with aromatic components characterized can help in products with distinct notes and quality assurance * Variation in quality of essential oils which impart different notes. * Controlled release of essential oil | Chemistry, Botany, Biotechnology, Microbiology, Agriculture | Phytochemical screening and chromatographic techniques |

1. **MAS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Research Topics** | **Expected Output/Outcome** | **Preferred Academic Qualification** | **Preferred Skills** |
| 1 | Impact of Seasoning Methods on Moisture Content and Dimensional Stability of Timber in Nepal (*Pinus roxburghii* (Pine) and *Dalbergia sisso* (Sisso)) | * Compare the effects of different seasoning methods on moisture content and dimensional stability of common Nepalese timber species | Wood Science, Forestry, Agriculture, Chemistry, Physics | Knowledge on wood anatomical features and their identification, Skills on R studio/Python, GIS and remote sensing. |
| 2 | Anatomical Variation and Mechanical Performance of Sal (*Shorea robusta*) | * Investigate how anatomical traits of Sal (*Shorea robusta*) vary across Nepal’s eco-climatic zones and how these variations influence mechanical performance, in order to identify zones with optimal wood properties. * Enable targeted harvesting, reduce processing waste, improve product quality, and boost revenues for Nepal’s timber industry and rural communities | Forestry, Botany, Engineering, Biotech, Agriculture, Environment | Basic Knowledge in tree physiology, Experience of working in lab and field visit Skills on R Studio and big data analysis. GIS knowledge will be advantageous |
| 3 | Understanding Growth Patterns and Resin Deposition in Agarwood Through Tree-Ring Analysis | * Investigate the relationship between tree-ring growth patterns and resin deposition in agarwood-producing species for better | Biotechnology, Environmental Science, Agriculture, Zoology, Microbiology | Basic knowledge on wood anatomical features and their identification Wet Laboratory skills on R studio/Python, GIS, Remote sensing will be advantageous. |
| 4 | Evaluating the Potential of Biochar to Mitigate Soil Acidification in Nepalese Agricultural Lands | * Increased Agricultural productivity and farm income by reducing the acidity in soil | Agriculture Science, Environmental Science, Biotechnology, Botany, Microbiology | Knowledge on Experimental design and field trial, Data analysis and interpretation, Basic laboratory knowledge |
| 5 | Effects of Seasonal Weather Patterns on the Mechanical Properties of Bamboo | * Improved selection and harvest timing * Increased value in bamboo-based construction and innovation | Engineering, Environmental Science, Biotechnology, Agriculture, Botany | Previous knowledge on mechanical testing |
| 6 | Major Components of Ginger Varieties from Nepal - Characterization and Application for Skin Care Products and a Remedy for Acne Treatment | * Identification of chemotypic variation in Nepal are citral/α-zingiberene chemotype or geraniol-rich chemotype * Inhibitory effect of major compounds of ginger on skin pathogens | Agriculture, Botany, Biotechnology, Chemistry | Microbial assay skills |
| 7 | Optimization of herbal extract for cosmetic formulations and assessment of antioxidant and *in* skin protective properties | * Integration of herbal extract and their formulation are in demand in personal care segment | Agriculture, Botany, Biotechnology, Chemistry | Microbial assay skills |
| 8 | *In silico* assessment of medicinal plant extracts for the exploration of therapeutic potential (immunomodulatory, antimalarial, antiviral, antidiabetic and antibacterial) | * Value added product from medicinal plants of Nepal (nutraceuticals) | Chemistry, Botany, Biotechnology | Computational chemistry skills |
| 9 | Estimation of mechanical and electronic properties of fibrous material and its molecular-level analysis through computational simulation (molecular mechanics, DFT, and beyond) | * Development of sturdy construction materials employed for various purposes | Physics, Material Science, Engineering | Computational chemistry skills |
| 10 | Optimization of biocompatible materials by first principle simulation | * Effective and low-cost medical products | Physics, Biochemistry | Computational chemistry skills |
| 11 | Analysis of flavor and colorant compounds of turmeric cultivated in Nepal | * Different processing process makes different grade of turmeric * Evaluation of quality turmeric for export | Chemistry, Botany, Food technology Biotechnology, Microbiology, Agriculture | Phytochemical separation |
| 12 | Characterization of herbal material extracts for dermal care | * Skin care products against pathogen of concern in Nepalese population | Chemistry, Botany, Biotechnology, Microbiology, Agriculture | Phytochemical screening and chromatographic techniques |
| 13 | Development of high-performance natural fiber composites | * Production of higher-value fiber products * Waste reduction * Employment opportunities in rural areas * Enhanced lab certification and export potential * Environmental sustainability | Chemical Engineering, Chemistry, Biotechnology, material science Botany | Wet lab experience, material testing, knowledge of fiber chemistry |
| 14 | Impregnation of nanoparticles into timber and bamboo for enhanced durability | * Increased service life and structural reliability of timber and bamboo products * Higher market value and competitiveness of treated materials * Reduced maintenance and replacement costs * New business opportunities in nanomaterial production and wood modification | Chemical Engineering, Chemistry, Biotechnology, material science, Botany, Forestry | Wet lab experience, Experience in nanomaterial synthesis, microscopy (e.g., SEM, TEM) |
| 15 | Development of sustainable adhesives from natural resins | * Development of high-value forest-based products * Promotion of green exports * Rural employment generation * Substitution of synthetic adhesives through domestic production | Chemical Engineering, Chemistry, Biotechnology, Botany | Wet lab experience, polymer chemistry, formulation techniques |
| 16 | Carbon nanoparticles for heavy metal removal | * Affordable water treatment solutions * Value-added utilization of bamboo * Practical applications in municipal systems * Environmental and public health protection | Chemical Engineering, Chemistry, Environmental science and engineering, Biotechnology, Botany | Wet lab experience, Nanomaterial synthesis, adsorption studies, water quality testing (AAS/ICP-MS) |
| 17 | Sustainable energy production from forest waste biomass | * Development of new fuel markets (pellets/briquettes) * Reduced reliance on LPG and firewood * Income generation from biomass in rural areas * Improved air quality and public health | Forestry, Chemical Engineering, Chemistry, Environmental science, Mechanical Engineering | Wet lab experience, combustion studies |

1. **Artificial Intelligence**
2. **PhD**

**Thesis Topics**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Theme/Topic** | **Expected Output/Outcome** | **Preferred Qualification** | **Preferred Skills** |
|  | 1. Fast domain adaptation and test time learning for multilingual mixed language LLMs | Improve existing LLM architectures for continual learning in mixed code settings allowing for continual learning without catastrophic forgetting. |  | Coding, Data Analytics, IOT HW  ML  LLM |
|  | 2. Enhancing Small VLMs | Improve existing foundational VLMs. Demonstrate efficacy with few shot domain adaption in new tasks such x-ray diagnosis, disease identification within multiple modalities. |  | Multimodal Learning,  Few-Shot Adaptation, Domain Transfer |
|  | 3. Improved reasoning in small VLMs | Develop improved search and reasoning capabilities within VLMs. Demonstrate the effectiveness in game playing with self play. |  | Reinforcement Learning (RL)  Tree Search & Planning  Multi-Agent Learning  Neuro-Symbolic Reasoning |
|  | 4. Smart Mushroom Farming: An Edge AI and IoT-Based Monitoring System | Create an intelligent system for real-time monitoring and environmental control in mushroom cultivation using edge devices, with automated alerts and yield optimization |  | Edge AI, IoT  Predictive Analytics  Automated Alerts |
|  | 5. AI-Based Plant Disease Diagnosis Using Multimodal Sensing and Visual Learning | Design a deep learning-based tool that uses visual imaging and sensor data to identify and classify diseases in high-value crops, including real-time alerts and treatment suggestions. |  | AI, IoT, Computer Vision  Edge AI |
|  | 6. AI-Driven secured Crisis Communication Framework for Humanitarian Response | Develop a multilingual AI system that analyzes and generates crisis-related communication (e.g., SMS, radio transcripts, social media) to support humanitarian coordination in real time. |  | Multilingual NLP  Real-time Processing  Crisis Informatics  Humanitarian AI |
|  | 7. IoT and AI for Post-Disaster Agricultural Recovery Assessment | Design a drone- and sensor-assisted AI system to assess damage to farmland post-disaster (e.g., floods, earthquakes), providing actionable insights for quick recovery and resource distribution. |  | IoT, Sensors, Aerial Imaging  Disaster Assessment  AI Analytics  Resource Optimization |
|  | 8. AI-Augmented Early Warning Systems for Natural Disasters in Rural Areas | Develop AI models integrated with IoT sensors and geospatial data to provide real-time early warnings for floods, landslides, or droughts, with a focus on remote and vulnerable communities. |  | Predictive Modeling  IoT  Geospatial AI  Early Warning Systems |
|  | 9. Explainable AI for Cybersecurity Risk Governance in Critical Infrastructure | Design interpretable AI systems for identifying, prioritizing, and mitigating cyber risks in public infrastructure, supporting government-level cybersecurity policy decisions. |  | Explainable AI (XAI)  Security and Protection  Policy-Driven Security |
|  | 10. Adaptive IoT and Machine Learning Framework for Climate-Smart Precision Farming | Develop an intelligent farming system that integrates IoT sensor networks with machine learning algorithms to adaptively manage irrigation, fertilization, and environmental controls in response to real-time climate and soil conditions. The focus is on optimizing yield and resource use in varying weather patterns. |  | AI, IoT,  Predictive Analytics  Resource Optimization |

1. **Sustainable and Resilient Infrastructure**

**PhD**

| 1. **S.N.** | **Theme/Topic** | **Expected Output/Outcome** | **Preferred Qualifications** | **Preferred Skills** |
| --- | --- | --- | --- | --- |
| 1 | Mortar optimization in stone masonry structures for enhanced structural performance (Numerical and Experiment study) | Cost effectiveness in building construction through the use of locally available materials. |  | For PhD:  Master in Civil Engineering, Structural/ Earthquake Engineering or related  Skill: Structural Dynamics, Material testing experiment, Computer Programming skills  For Master:  Bachelor Civil Engineering or related |
| 2 | Advancement of 3D Applied Element Method for numerical analysis of heterogeneous stone masonry structures | Same as above |  | Master in Civil Engineering, Structural/ Earthquake Engineering or related  Skill: Structural Dynamics, Computer Programming skills |
| 3 | Structural health monitoring and seismic vulnerability assessment of masonry buildings. | Cost effectiveness in building repair and strengthening |  | Master in Civil Engineering, Structural/ Earthquake Engineering or related  Skill: Structural Dynamics, Computer Programming skills |
| 4 | AI-Based Assessment of Earthquake-Induced Structural Damage Using Post-Disaster Imagery | Same as above |  | Structural/ Earthquake Engineering with the knowledge of AI/ machine learning |
| 5 | Vibration-based structural health monitoring and LIDAR Point Cloud Analysis of heritage structures | Same as above |  | For PhD:  Master in Civil Engineering, Structural/ Earthquake Engineering or related  Skill: Structural Dynamics, Coding skills |
| 6 | Experimental and Numerical modeling and component-level evaluation for cost-effective retrofitting techniques | Same as above |  | For PhD:  Master in Civil Engineering, Structural/ Earthquake Engineering or related  Skill: Structural Dynamics, Material testing experiment, Coding skills  For Master:  Bachelor Civil Engineering or related |
| 7 | Evaluation of geometrical and mechanical characterization of *Bambusa vulgaris* and *bambusa arundinacea* | Same as above |  | Master in Civil Engineering or related subject |
| 8 | Evaluation of mechanical characterization of common Nepali timbers and analysis of structural performance of traditional timber joint connections | Same as above |  | Civil Engineering |
| 9 | Risk-sensitive land use planning in traditional settlement | Promotion of sustainable tourism in rural settlements |  | PhD:  Master in Urban Planning, Infrastructure planning, Civil Engineering, or related degree  Skills: GIS  Master Degree:  Civil Engineering or related degree |
| 10 | Integration of indigenous knowledge and digital technologies for risk-resilient rural tourism infrastructure planning | Promotion of sustainable tourism in rural settlements |  | PhD:  Master in Urban Planning, Infrastructure planning, Civil Engineering, or related degree  Master Degree:  Civil Engineering or related degree |

1. **MAS**

| **No.** | **Theme/Topic** | **Expected Output/Outcome** | **Preferred Qualifications** | **Preferred Skills** |
| --- | --- | --- | --- | --- |
| 1 | Mortar optimization in stone masonry structures for enhanced structural performance (Numerical and Experiment study) | Cost effectiveness in building construction through the use of locally available materials. |  | For PhD:  Master in Civil Engineering, Structural/ Earthquake Engineering or related  Skill: Structural Dynamics, Material testing experiment, Computer Programming skills  For Master:  Bachelor Civil Engineering or related |
| 2 | Material characterization of stone masonry structures with variations in stone and mortar composition | Same as above |  | Bachelor Civil Engineering or related |
| 3 | Computational molecular-level study for enhancing mortar bonding properties | Same as above |  | Bachelor in Civil Engineering or Material science |
| 4/5 | Experimental and Numerical modeling and component-level evaluation for cost-effective retrofitting techniques | Same as above |  | For PhD:  Master in Civil Engineering, Structural/ Earthquake Engineering or related  Skill: Structural Dynamics, Material testing experiment, Coding skills  For Master:  Bachelor Civil Engineering or related |
| 6 | Experimental evaluation of traditional bamboo jointing techniques in Nepal | Affordable and safe building construction |  | Bachelor in Civil Engineering |
| 7 | Machine Learning-based modeling of the relationship between geometric and mechanical properties of *Bambusa nutans* and *Bambusa balcooa* | Same as above |  | Bachelor in Civil Engineering with the knowledge of computer programming |
| 8/9 | Evaluation of geometrical and mechanical characterization of *Bambusa vulgaris* and *bambusa arundinacea* | Same as above |  | Master in Civil Engineering or related subject |
| 10 | Evaluation of mechanical performance of laminated bamboo boards for structural applications. | Same as above |  | Bachelor in Civil Engineering |
| 11 | Life Cycle Assessment (LCA) of bamboo-based building structures. | Same as above |  | Civil Engineering,  Environmental Engineering/ science, Architecture,  Construction Management,  Building Technology,  Materials Science |
| 12 | Effects of Seasonal Weather Patterns on the Mechanical Properties of Bamboo | Same as above |  | Civil Engineering,  Environmental Engineering/ science, Architecture,  Construction Management,  Building Technology,  Materials Science |
| 13/14 | Evaluation of mechanical characterization of common Nepali timbers and analysis of structural performance of traditional timber joint connections | Same as above |  | Civil Engineering |
| 15/16 | Risk-sensitive land use planning in traditional settlement | Promotion of sustainable tourism in rural settlements |  | PhD:  Master in Urban Planning, Infrastructure planning, Civil Engineering, or related degree  Skills: GIS  Master Degree:  Civil Engineering or related degree |
| 17/18 | Integration of indigenous knowledge and digital technologies for risk-resilient rural tourism infrastructure planning | Promotion of sustainable tourism in rural settlements |  | PhD:  Master in Urban Planning, Infrastructure planning, Civil Engineering, or related degree  Master Degree:  Civil Engineering or related degree |
| 19 | Socio-economic impact of rural tourism on local communities | Promotion of sustainable tourism in rural settlements |  | Bachelor degree in Civil Engineering, Architecture, Economics, and Management |

**Attachment 4**

**Framework for Research Statement**

Research statement of up to 600 to 800 words related to the program the student has applied for shall be developed by the applicant. Students should write this statement for one of the topics listed in Attachment 3. The statement shall include

* Title
* Research problem definition
* Importance of the selected research problem in terms of contribution to national economy
* Research plan
* Expected results and impact

MAS applicants should select three thesis topics of their choice in the priority order using the table below. The University will consider for admission of each applicant three topics best suited to him/her based on his/her qualifications and experience, which may or may not be the same as selected by the applicant.

The interview will determine suitability of the particular applicant for the three thesis topics considered for him/her. The interview scores for various topics may be different. The student for each thesis topic will be selected based on the overall score of applicants suitable for the particular thesis topic. A student may be selected for a thesis topic for which he/she has not scored the highest score among topics he/she was considered. However, for while allocating the financial assistance the highest score he/she has scored for all topics he/she was considered will be used.

**Preferred Thesis Topics**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Topic[[4]](#footnote-4) | Priority | Remarks |
| 1 |  | First |  |
| 2 |  | Second |  |
| 3 |  | Third |  |

**Attachment 5**

**Framework for Personal Statement**

A personal statement shall be a concise description of the personal background, academic journey and research interests of the applicant of up to 800 to 1,000 words. It shall also highlight specific qualities and special skills of the applicant which may be helpful for the successful completion of the studies and research. He/she shall also describe the reasons for selecting MBUST and the program.

**Attachment 6**

**Format for Publication List**

In chronological order based on the year of publication

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Title of the publication | Author/s | Name and other details of Journal/Book/others | Web reference | Year |
|  |  |  |  |  |  |
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1. All attachments may be updated. Please keep visiting the website for updates. [↑](#footnote-ref-1)
2. Scholarship shall not be provided for individuals who are on paid leave. [↑](#footnote-ref-2)
3. Applicants, who meet qualification requirements but not selected within the available seats, may admitted if they are willing pay tuition fees and study without scholarships. [↑](#footnote-ref-3)
4. To be selected from among thesis topics in Attachment 3 related to the program and level you have applied for. [↑](#footnote-ref-4)