



**Memorandum of Cooperation
Between
Jawaharlal Nehru Technological University
Hyderabad, India**



**And
Blekinge Institute of Technology, Sweden**

**on
Five Year Integrated Double Degree Masters Programme
in**

**Computer Science, Software Engineering, Artificial Intelligence and Machine Learning
(AI&ML), Machine Learning, Sensors, and Systems**

The Jawaharlal Nehru Technological University Hyderabad (JNTUH), India and the Blekinge Institute of Technology (BTH), Sweden (hereafter “the parties” or “the institutions”) agree on the following modalities for academic cooperation.

I. Scope of the Academic Cooperation

The parties agree to jointly offer Five Year Integrated Double Degree Masters Programmes in the specialization of Computer Science, Software Engineering, Artificial Intelligence and Machine Learning and Machine Learning, Sensors & Systems at with mandatory education both JNTUH, India and BTH, Sweden.

II. Five Year Integrated Double Degree Masters Programme

The Five Year Integrated Double Degree Masters Programme (hereinafter referred to as the “IDDMP”) described by this agreement is limited to the specializations/ sub-specializations of:

- Software Engineering
- Computer Science
- Artificial Intelligence and Machine Learning
- Machine Learning, Sensors & Systems

The IDDMP will be jointly conducted by JNTUH College of Engineering, Jawaharlal Nehru Technological University Hyderabad, Hyderabad, India and Blekinge Institute of Technology, Sweden from 2023- 2024 academic year (September 2023) as per the following modalities.

1. Programme Structure

- 1.1. The duration of the IDDMP will be of five years (XXX Credits/ equivalent to 300 BTH credits) which includes education at JNTUH and at BTH. The students admitted will undergo 3 ½ years (Seven semesters) of mandatory education at JNTUH and 1½ years (Three semesters, 90 BTH credits) of mandatory education at BTH which includes Master’s thesis.

2. Curricula/Syllabus

- 2.1 The curricula and syllabus of IDDMP is developed jointly by the BTH, Sweden and JNTUH India and is based on courses offered by the respective institutions.
- 2.2 JNTUH is responsible for the courses in the 1st, 2nd and 3rd years, and the first semester in the 4th year including U.G (Bachelor) Project.
- 2.3 The coursework for the first semester in the 4th year shall be delivered by JNTUH shall be suggested by BTH.
- 2.4 BTH is responsible for the courses of the second semester of the 4th year, and the 5th year (two semesters) at BTH in Sweden which includes Master's thesis work.
- 2.5 The agreed curriculum connected to the responsibilities of BTH shall be incorporated into "Master Qualification Plan" at least a year before the commencement of the studies at BTH.
- 2.6 The parties shall assure that the agreed curriculum is followed, and the examination quality is assured according to the standards of the both the institutions and respective national requirements of technical education.
- 2.7 The curriculum integration/consultation meetings shall be scheduled either at JNTUH or BTH at least on the biennial basis in one direction as per the convenience.
- 2.8 The parties agree to allow the necessary changes required in the curricula / syllabus as per the joint consultation, whenever needed.

3. Number of Seats, Tuition Fee and Scholarships

- 3.1 The admission intake of IDDMP for each offered specialization shall be maximum of 20 seats and unless otherwise agreed mutually.
- 3.2 The parties shall structure the tuition fee adhering to the principal of full cost coverage of the tuition. The tuition fee for the IMDDP shall be agreed mutually.
- 3.3 The following tuition fee structure shall be applicable for the students admitted to IDDMP at JNTUH in the academic year **2023 -2024** and **2024-2025** is mentioned below:
 - Tuition fee for each semester at JNTUH shall be 100 000 INR (Indian Rupees)
 - Tuition fee for each semester at BTH shall be 52 500 SEK (Swedish Kronor)
- 3.4 The parties shall review the tuition fee structure of IDDMP with regular interval of two academic years with effect from 2025 – 2026 aligning to the parity with tuition fee level decided by the Government of Sweden to the domestic students.
- 3.5 The enrolled student shall pay the tuition fee as per the regulations of the universities.
- 3.6 The enrolled students in the IDDMP are eligible to apply for BTH's Scholarship Programme.



3.7 For other fees (like extended services, for example specialized training if any), payment charges will be agreed separately.

4. Admission Procedure to IDDMP

Admission to the IDDMP shall be handled by JNTUH in association with BTH, Sweden with formalities decided by the both the parties. The admitted students shall fulfil both the academic and language requirements as mentioned below:

4.1 Academic requirements:

The students with Intermediate Education (10+ 2) or Equivalent in Mathematics, Physics and Chemistry Groups with minimum first class or unless otherwise agreed mutually.

4.2 Language requirements:

The students should meet the English requirement with upper secondary studies with grades issued by Telangana State / Andhra Pradesh Board of Intermediate Education or equivalent boards with English as the medium of instruction.

The students, who have studied in other language (medium of instruction other than English) during the intermediate education, then the student should demonstrate to meet the English language requirement through an internationally approved English test such as IELTS or TOEFL. The students should meet the English requirement by IELTS or TOEFL before seeking an admission to the studies at BTH.

- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL iBT: Score of 20 (scale 0-30) in written test, total score of 90

5. Transition Requirements to BTH

4.1 The student admitted in IDDMP shall have mandatory mobility to BTH during their 8th Semester of the programme. In order to have transition/proceeding to BTH, The student should have studied seven semesters of studies in respective programme and UG (Bachelor) project at JNTUH and also meet the transition criteria agreed by the parties. The agreed transition criteria shall be incorporated in “**Master Qualification Plan**” connected to respective specializations.

a). Computer Science, AI and ML & Software Engineering Specialization

The students who have completed education equivalent to 150 BTH credits in Computer Science/ Computer Science (AI and ML) and undertaken the P.G (masters level) courses in 4th year I Semester. The identified prerequisite courses respective to each specialization shall be listed in the “Master Qualification Plan” approved by BTH. The students should also finish UG (Bachelor) level project work before undergoing education at BTH.

b) Machine Learning, Sensors, and Systems



The students who have completed education equivalent to 150 BTH credits in Electronics and Communication Engineering, including P.G (masters level) courses in 4th year I Semester, will be taken for study at BTH. The identified prerequisite courses shall be listed in the Master Qualification Plan approved by BTH. The students should also finish UG (Bachelor) level project work before undergoing education at BTH.

6. Transition/ Admission Process to BTH

JNTUH and after evaluation of the academic merits should forward the list of the students who are deemed to be eligible based on the agreed prerequisites according to the deadlines communicated by the “Institution’s International / Admission office” or other duly appointed organization of BTH.

The students who are qualified for mobility to BTH should make an application to the mobility/ exchange portal in order seek a formal admission to the studies from BTH.

The evaluation shall be performed by the receiving institution’s admission/ International Office or other duly appointed organization at the receiving institution, responsible for admission of incoming exchange/ agreement students as per the student’s administration regulations and the approved “Masters Qualification Plan”.

7. Examination, Forms of Assessment and Grading System

The performance of the candidate will be evaluated course wise at both JNTUH & BTH. Each course will have independent evaluation systems. The evaluation will be done as per their performance in Internal/End Theory examinations, Laboratory Examinations, Assignments, Project reports etc.

8. Credits and Grades Transferring from JNTUH to BTH

BTH shall recognize the PG (Master level) courses undertaken during first semester of 4th year of the IDDMP at JNTUH. BTH transfers the credits equivalent to 30 higher education credits from JNTUH to BTH. The transferred credits shall be part of the degree at BTH. BTH doesn’t award degree with class or provide consolidated GPA/ CGPA.

9. Credits and Grades Transferring from BTH to JNTUH

One year of full-time studies will be for forty weeks is corresponds to sixty higher education credits at BTH. The ninety higher education credits are transferred from BTH and considered to be equivalent to one and half years of full-time PG credits at JNTUH during the award of the degree at JNTUH.

BTH adopts either a seven-point (A, B, C, D, E, Fx,F) or a three-point (G/Ux/U) criterion-referenced grading scale for all course. In the seven-point grading scale, A–E are passing grades, A being the highest and E the lowest. In the three-point grading scale, G is the only passing grade.

JNTUH considers the following grade conversion scale while transferring the grades under a seven-point scale from BTH to JNTUH degree.

Grade in BTH	Equivalent Grade in JNTUH	Equivalent Grade Value in JNTUH
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A = Excellent	O= Outstanding	10
B= Very good	A+=Excellent	9
C= Good	A=Very Good	8
D= Satisfactory	B+= Good	7
E= Sufficient	B=Pass	6
F= Fail	F=Fail	0

Note: In the case of the three-point grading scale, G = Godkänd (Pass), the credits of the course will be considered for the transfer, but the grade is computed $G(BTH) = C(BTH) = A(JNTUH)$ for the GPA/CGPA or for the “award of class” in the degree at JNTUH.

Both the parties will update the credits and grades conversion scales as per the changes in the regulations and will be signed separately.

10. Award of Degree

A student who has successfully completed the IDDMP and fulfils the requirements for the award of the degree shall receive UG (B. Tech) degree from JNTUH and PG (Masters) degrees from both BTH & JNTUH institutions as per their opted specializations i.e.

10.1 Specialization – Computer Science

Degree of Bachelor of Technology in Computer Science and Engineering by JNTUH,
Degree of Master of Technology in Computer Science & Engineering by JNTUH
Degree of Master of Science (120 credits) Main field of study: Computer Science by BTH

10.2 Specialization – Artificial Intelligence and Machine Learning (AI+ML)

Degree of Bachelor of Technology in Computer Science and Engineering (Artificial Intelligence and Machine Learning) by JNTUH
Degree of Master of Technology in Artificial Intelligence and Machine Learning by JNTUH.
Degree of Master of Science (120 credits) Main field of study: Computer Science Specialization: AI and Machine Learning by BTH

10.3 Specialization – Software Engineering

Degree of Bachelor of Technology in Computer Science and Engineering by JNTUH,
Degree of Master of Technology in Software Engineering by JNTUH.
Degree of Master of Science (120 credits) Main field of study: Software Engineering by BTH

10.4 Specialization – Machine Learning, Sensors and Systems

Degree of Bachelor of Technology in Electronics and Communication Engineering at JNTUH,
Degree of Master of Technology in Machine Learning, Sensors & Systems by JNTUH.
Degree of Master of Science (120 credits) Main field of study: Electrical Engineering
Specialization: Machine Learning, Sensors and Systems by BTH



11. Examinations Support

11.1 Both the parties agree to extend the support to conduct the retake examinations (supplementary examinations) at each other's university under examination on another location for the students enrolled within the scope of the agreement.

11.2 Both the parties agree to extend the support for one occasion for each subject during the study period at each other's university.

11.3 In order to facilitate the conduct of the examinations, the parties must inform the schedule with details of the students at least two weeks prior to the date of examinations to the examination department.

12 Re-registration of courses

12.1 There is no additional tuition fee for re-registration of the unfinished courses at BTH. However, it is subject to the places available in the department for the course.

12.2 In the case of closure of the course, then BTH shall provide the possibility to register to the alternative course, with the concern from the academic bodies at JNTUH and BTH. The new study plan will be established through adapted study plan (AUP). The AUP is subject to approval from academic board headed by Pro-Vice chancellor and Deans of BTH. BTH agrees to offer agreed tuition fee level for a maximum of two additional courses with a condition where the students want to use the courses to be a part of the degree.

12.3 The student shall be liable to pay the tuition fee, if the students wish to undertake an additional course (which are beyond the agreed study plan/ Masters Qualification Plan).

13. Faculty mobility:

13.1 Both the parties shall include faculty mobility for teaching purposes, between the universities connecting to the educational programme to enhance the quality and visibility of the programme. Both the parties shall sign separate agreement covering the mobility aspects of faculty and researchers.

14. High-level meetings:

14.1 Both the parties shall agree conduct High-level meetings headed by management/administration to strengthen the cooperation. The High-level meetings may be scheduled either at JNTUH or BTH on the biennial basis at least in one direction as per the convenience.

15. Accommodation & Travel

15.1 BTH shall facilitate to provide student accommodation to the enrolled students, if applications for student accommodation are submitted within set deadlines to the recommended housing companies. All expenses for accommodation, living and travel should be borne by the individual students.



16. In case of global pandemic or calamities

16.1 Both the parties shall strive to restructure collaboration, when there is no provision for the students to undergo physical mobility period to each other's institutions due to extraordinary situations (such as global pandemic, natural calamities) which are beyond the control of the students.

16.2 Both the parties shall explore the possibility to offer the education on digital mode to encourage virtual mobility between the institutions as first option. In such case, the student shall be registered in the host institution.

16.3 In case of national restrictions, both the parties shall agree on providing the students with an opportunity to complete entire education in their respective home universities i.e. without any physical or virtual mobility to the host university.

17. Other conditions

17.1 Student participating in this IDDMP shall be covered with insurance provided by the BTH during the mobility period to BTH.

17.2 Students participating in this IDDMP shall meet all the requirements of immigration policy of the host country.

18. Operation of IDDMP

18.1 The parties agree to appoint a cooperation manager at each university for the smooth operation of the IDDMP.

19. Validity of the Agreement

✓ 19.1 This agreement is valid after the parties have signed it. The parties agree to evaluate the agreement and cooperation every 5 years, starting from 2028.

19.2 Either party may withdraw from this agreement by giving written notice before 31st December of any year, of its intention to withdraw with effect from 1st September of the next year. However, in case of withdrawal for any other reason other than stated in 19.3, students admitted to and registered at the IDDMP shall not be affected of the withdrawal and shall be allowed to continue their education within the scope of the agreement.

19.3 Should either of the parties fail to fulfill the present agreement, or in the case of any breach or violation of the agreement from any of the parties, the agreement ceases to be valid.

19.4 In cases where the terms and conditions of the present MoC and Laws and Regulations of the respective country differ, the Laws and Regulations of the respective country shall prevail.

Any additional cooperation not covered by this agreement shall be handled in new agreements between the two parties.

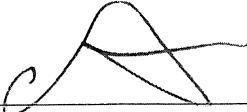
This agreement is signed in TWO copies.

The parties choose for purposes of this Agreement as their domicilium citandi et executandi, the following addresses:



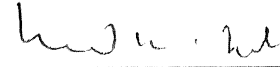
In Witness of the terms of this agreement our signatures are affixed:

Blekinge Institute of Technology
Karlskrona
Blekinge, Sweden
SE-37179



Prof. Mats Viberg
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Prof. Manzoor Hussain Mohammad
Registrar

Date: 20230906
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Date: 20230906
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