Accelerated Master's Program
Collaboration Agreement
Between
Michigan Technological University
and NIT Calicut

To promote educational excellence and academic cooperation, Michigan Technological University ("Michigan Tech"), located in Houghton, Michigan, 49931, and National Institute of Technology Calicut ("NITC"), located in Calicut, Kerala, 673601, agree to implement an Accelerated Master's Program ("Program"). This Agreement is made under the following conditions set forth below:

1. Mutual Consent. The Program is established by mutual consent by both institutions.

2. Degree Program Guidelines. Guidelines for each degree program within the Program are attached as Exhibit A.

3. Study Plan. Students wishing to participate in the Program should consult with the Program liaison at NITC to determine appropriate course selection and preparation requirements. The intention is for students to be able to complete the master's degree in one year at Michigan Tech after receiving a bachelor's degree at NITC and double-counting up to six (6) credits towards the master's degree (these course details are given as an addendum in Exhibit B). Successful completion of the master's degree is, however, entirely dependent on the performance of individual students.

4. Academic Year.
    a. An 'academic year' in the context of this agreement is defined as a fall and a spring semester.
    b. At Michigan Tech, the fall semester begins in late August, and the spring semester begins in early January.

5. Graduate Admission Criteria.
    a. Students are required to apply through the standard Graduate School admission process, identify that they wish to participate in this negotiated agreement within the application, and must be accepted by the academic Program to which they apply. Michigan Tech reserves the right to make all admission decisions based on established criteria, standards, and enrollment capacities.
    b. Program students must submit a complete application package, the components of which may vary by Program. See the appropriate degree program's Exhibit A for more information.
    c. Students must apply and be accepted before receiving their Bachelor's degree at their home institution.
    d. Students must start the Program immediately after receiving their Bachelor's degree. Students receiving their Bachelor's degree in the Spring must register for the Fall semester; however, they may register for the Summer session. Students receiving their Bachelor's degree in the Fall must register for the Spring semester.
    e. Graduate Visa Status: Michigan Tech agrees that students admitted under Section 5 above must provide necessary supporting documentation for the solicitation of the F-1 student visa. Students in this visa category are required to enroll full-time in a minimum of nine (9) credits each academic-year semester of the Program and are additionally subject to adhering to all other rules and regulations governing F-1

visa holders.

f.

6. <u>Conferring of Degrees</u>. Successful completion of the Program will lead to a master's degree awarded by Michigan Tech. Michigan Tech makes no express or implied guarantee that Program students enrolling in a master's Program will successfully complete a master's degree.

7. <u>Tuition and Fees.</u> Neither Michigan Tech nor NITC will be responsible for the costs of tuition and fees, books, non-mandatory fees, equipment, room, board, travel, transportation or other personal expenses of Program students. For more information on the cost, go to: https://www.mtu.edu/gradschool/financial/cost/

8. <u>Student Standards of Conduct.</u> The same regulations and performance standards will govern program students as all Michigan Tech students. Michigan Tech reserves the right to dismiss any Program student whose academic standing or conduct warrants such action.

9. <u>Health and Medical Insurance.</u> Program students will be personally responsible for adhering to Michigan Tech's health/medical insurance requirements for the time period of their participation. Michigan Tech will assist incoming student participants in identifying available health insurance options. Program students shall provide emergency contact information.

10. <u>Housing.</u> Michigan Tech will make every effort to assist participating students in securing on-campus housing for the period that they will be on the Michigan Tech campus; however, on-campus housing is not guaranteed, and if secured, the cost of room and board will be the responsibility of the students. Program students are responsible for following Michigan Tech's on-campus housing application procedures and policies if they live on campus.

11. <u>Access to Facilities.</u> Program students shall be entitled to participate in any introductory or orientation courses or programs that may customarily be arranged for students at Michigan Tech and shall have the same rights of access to academic and social facilities as all Michigan Tech students.

12. <u>Intellectual Property</u>: Ownership of inventions, discoveries, and works of authorship which are discovered, conceived, and/or created directly pursuant to any activity under this Agreement shall be with the university(s) where such Intellectual Property was discovered, conceived, and/or created.

14. Administrative Liaison. Both parties agree to appoint a coordinator or administrative liaison to support the Program. If a new coordinator or administrative liaison is appointed, a written notice of the change should be given to the other institution.

For Michigan Tech:
Jacque Smith
Director, Grad Enrollment Services
Graduate School
Michigan Technological University
1400 Townsend Dr.
Houghton, MI 49931 USA.
Tel: 906–487–1434
jacque@mtu.edu

For NITC:
M. K. Ravi Varma,
Chairperson, Centre for International Relations & Foreign Languages,
National Institute of Technology Calicut,
Calicut 673601 Kerala, India.
Tel: +91(495) 285105 (Off.)
Email: chair.cirfl@nitc.ac.in, r.varma@nitc.ac.in

15. Cost sharing. No monetary consideration will be exchanged between the two institutions, nor will there be any indemnities, reimbursements for expenses, or sharing of fees or profits arising from the exchange.

16. Definition of Relationship. The relationship of Michigan Tech and NITC under this Agreement shall be that of independent contractors, and neither party shall be deemed, nor hold itself out as being, a partner or agent of the other party. Neither Michigan Tech nor NITC shall be liable for acts of the other, nor shall they be liable for the acts of students participating in the Program. Neither institution will use the name or logo of the other except to accurately describe the services or benefits being provided by each institution.

17. Equal Opportunity Policies. Both institutions subscribe to a policy of equal opportunity and will not discriminate based on race, religion, color, national origin, age, sex, sexual orientation, gender identity, height, weight, genetic information, marital status, veteran status, or disability.

18. Duration of Agreement. This Agreement is subject to review at the end of the first year and shall be effective for three (3) academic years beginning upon the date of the last signature. It shall be subject to revision, modification or renewal by mutual written agreement. In particular, Michigan Tech may modify Exhibit A to become effective upon written notice of the such modification by Michigan Tech to NITC. Either party may terminate this Agreement by written notice submitted at least 90 days before the start of an upcoming academic semester. Termination would not affect students already engaged in the Program, who will be given a maximum period of two semesters to complete the Program. If the Agreement is not renewed by mutual consent or sooner terminated as allowed, the Agreement will conclude at the end of the specified time period.

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19. Entire Agreement. This Agreement embodies the entire understanding between Michigan Tech and NITC regarding the subject matter. All past discussions, agreements, and understanding, whether oral or written, formal or informal, are superseded by this Agreement.

In witness whereof, the parties have caused this Collaboration Agreement to be duly executed.

For Michigan Technological University:

Prof. Andrew Storer
Provost and Vice President for
Academic Affairs

Date February 14, 2023

For National Institute of Technology Calicut:

Prasad

Prof. Prasad Krishna,
Director

निदेशक / DIRECTOR
राष्ट्रीय प्रौद्योगिकी संस्थान कालिकट
National Institute of Technology Calicut
NIT Campus (P.O), Calicut, Kerala

Date 14 February 2023

National Institute of Technology Calicut
NIT CAMPUS (P.O)
Calicut - 673601
Kerala, India
राष्ट्रीय प्रौद्योगिकी संस्थान कालिकट

EXHIBIT A

to

Michigan Tech - [Partner NITC]

Accelerated Master's Degree Program Collaboration Agreement

Program Department: [Physics]
Degree Program:
[MS accelerated physics]
Contact Person/phone/email:
Ravindra Pandey,
pandey@mtu.edu, **906-487-2086**

Michigan Technological University Application/Admission Requirements:

- Students are required to apply through the standard Graduate School admission process, identify that they wish to participate in this negotiated agreement within the application, and must be accepted by the academic Program to which they apply. Michigan Tech reserves the right to make all admission decisions based on university criteria, standards, and enrollment capacities.
- Students are required to have a 3.0 or better cumulative GPA on a 4-point scale (equivalent to a GPA of 7.5 or better on a 10-point scale) upon completion of their Bachelor's degree to participate in this Program.
- Students must upload and provide all required application documents using their personalized admission portal, including:
    - Student Statements (Statement of Purpose and Personal Statement)
    - Transcripts
    - Letters of Recommendation (2)
    - Resume/Vitae
    - TOEFL: Minimum Score of 79 iBT or IELTS: Minimum Overall Band Score of 6.5
- Students must supply official proof of the Bachelor's degree and test scores upon enrollment into the master's Program.

Degree options are open to

[COURSEWORK/REPORT/THESIS] students. Degree

Requirements:

- Students are required to meet all the Graduate School Admissions requirements: http://www.mtu.edu/gradschool/prospective/apply-now/
- Students must work with an advisor to complete and file a Degree Schedule form and other required forms: https://www.mtu.edu/gradschool/policies-procedures/forms-deadlines/
- Thirty approved credits beyond the Bachelor's degree are required for a master's degree.
- A maximum of 12 credits may be at the 3000 or 4000 level (with program approval).

- A maximum of ten credits (including double-counted credits) may be transferred toward the Michigan Tech master's degree. Non double-counted credits may be used as long as they are not applied toward a degree at [Partner NITC]. The official [Partner NITC] transcript must indicate that the non double-counted transferred courses were not applied toward a degree at [Partner NITC].
- Up to six credits may be double-counted from the student's home institution with approval from the Graduate Program Director and the Graduate School.
- See all degree requirements at
- http://www.mtu.edu/gradschool/administration/academics/requirements/

- Unallowable credits:
  - Courses numbered below 3000
  - Research Credits
  - Audited courses
  - Continuous enrollment courses (ex: UN5951, UN5953)
  - Courses are taken for pass/fail
  - Credits applied toward another degree with the exception of the approved six double-counted credits.
- Grades:
  - See the Graduate School's requirements for students to maintain good academic standing at: http://www.mtu.edu/gradschool/ administration/academics/policies-procedures/good-standing/
  - Up to a maximum of 6 credits of BC/C grades may be applied toward the master's degree, at The discretion of the Graduate Program Director. See scholastic standards at: http://www.mtu.edu/gradschool/administration/academics/policies-procedures/scholastic- standards/

Time Limit:

- It is expected that students will be able to complete the degree requirements with three semesters of full-time study. The Graduate School sets program time limits.

EXHIBIT B
to
Michigan Tech - [Partner NITC]
Accelerated Master's Degree Program Collaboration Agreement
Addendum on the B. Tech. (EP) courses at NITC

1. **B. Tech. (Engineering Physics) Program:** B. Tech. (Engineering Physics) is a four-year (eight semesters) Program offered by NITC with a total credit requirement of 160, which is spread over 57 courses under various categories.
2. **Credit Definition:** One credit corresponds to one lecture hour per week or one tutorial hour per week, or two practical hours per week and the grade points are given on a 10-point CGPA scale.
3. **Program Design:** The B. Tech. (EP) program is so designed that the basic level courses are offered in the beginning semesters of this Program (1-4 semesters), and more advanced and elective courses are introduced in the 3rd and 4th years.
4. **List of Courses for the common six (06) credits:** Out of the various courses offered for the B. Tech. (EP) program, the following list of 3 and 4-level (third and fourth year) courses are proposed for consideration as common for both the B. Tech. (EP) and Accelerated MS degrees. Any two courses with a minimum of six (06) credits have to be taken and completed by a student opting for the Accelerated MS program.

Name of the Course	Course Code	Credits	Core/ Elective
3rd Year Courses			
Applied Quantum Mechanics	PH3001D	4	Core
Condensed Matter Physics – I	PH3002D	3	Core
Atomic & Molecular Physics	PH3003D	3	Core
Condensed Matter Physics – II	PH3004D	3	Core
Computational Physics	PH3005D	3	Core
Fiber Optics	PH3021D	3	Elective
Atmospheric and Environmental Physics	PH3022D	3	Elective
Optical Engineering	PH3023D	3	Elective
Thin film technology	PH3024D	3	Elective
Modern Optics	PH3025D	3	Elective
4th Year Courses			
Laser Physics	PH4001D	3	Core
Nuclear and Particle Physics	PH4002D	3	Core
Unconventional Electronics	PH4021D	3	Elective
Introduction to Optoelectronics	PH4022D	3	Elective
Relativity and Gravitation	PH4023D	3	Elective
Nano-Photonics	PH4024D	3	Elective
Light-Matter interaction in Resonators	PH4025D	3	Elective
Introduction to Critical phenomena	PH4026D	3	Elective
Modelling and Simulation using Python	PH4031D	3	Elective
Advanced Quantum Mechanics	PH4028D	3	Elective

Approved:

Department Grad Program Director:______________________ Date:__________

Department Chair:______________________ Date:__________

College Dean: David Hemmer Digitally signed by David Hemmer Date: 2022.11.21 16:32:06 -05'00' Date: __________

Graduate School Dean: Will Cantrell Date: 12/15/22