



MEMORANDUM OF UNDERSTANDING

BETWEEN

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA, (A.P) INDIA

AND

UNIVERSITY OF NORTHERN IOWA (UNI), USA

JNTUK, Kakinada and University of Northern Iowa (UNI), Iowa, USA (hereinafter "Parties" or "Institutions") agree to enhance the cooperation between the two institutions and have agreed to the following framework based upon principles of mutual equality and reciprocity of benefits.

Article 1: The Objective of the Agreement

Cooperation between the two universities will be undertaken from the perspective of discussing the possible implementation of specific academic and cultural ties. The cooperation will include educational and research activities in fields and disciplines offered at the two institutions.

Article 2: Forms of Cooperation

The Parties agree to move forward with further discussion, with the intent to seek agreement to design and make provisions for possible activities of common interest. Both parties agree that the cooperation may include, but not be limited to the following goals:

1. Development of Transfer Pathway Programs (3 + 1) for JNTUK, Kakinada students interested in earning a bachelor's degree from UNI. (*see Article 3*)
2. Exchange of visiting scholars, faculty, staff, and post-doctoral fellows for the purpose of academic work, teaching development and joint research.
3. Seek opportunities to cooperate in a variety of academic/research areas and curriculum development.
4. Explore joint application for funds/grants to both governments, research institutes and international organizations to launch joint research or academic projects.

5. The institutions will extend invitations for attending scholarly and technical meetings and assist in making arrangements for attending national and international conferences, as appropriate.
6. Exploration of joint student learning projects including identifying specific courses or academic areas for virtual or in-person short-term exchanges.
7. Examining other avenues for student mobility including short-term academic programs and through UNI's intensive English offerings (*see Article 4*)

Article 3: Plans for Transfer Pathway Program

The Parties have established the framework for a Transfer Pathway Program (also referred to as 3 + 1) to evaluate the first three years of JNTUK, Kakinada coursework, in a specific major, for transfer to complete a bachelor's degree at UNI in an additional one year. An evaluation has been completed for the JNTUK, Kakinada program (*Appendix A*) and others are under consideration. Additional majors can be evaluated as they are identified and desired by both institutions.

In order to move forward this initiative, here are the rights and obligations of UNI:

- UNI is responsible for evaluating JNTUK, Kakinada curriculum, for agreed-upon majors, to identify transfer credit and determine a 3 + 1 pathway for JNTUK, Kakinada students.
- UNI will provide the results of the transfer evaluation to JNTUK, Kakinada administration and representatives from the appropriate academic department with information on the credit evaluation and the needed numbers of credits once JNTUK, Kakinada students transfer to UNI.
- UNI will provide a clear outline of the financial budget necessary for JNTUK, Kakinada students to complete their degree at UNI per specific academic program.
- UNI will provide individual counseling for students on additional scholarship and funding options dependent on their academic major and past academic performance.
- UNI will support the promotion of this program through sharing relevant promotional materials, ensuring availability to individually advise students, and participation in in-person and promotional activities.
- UNI will provide support to JNTUK, Kakinada staff in their efforts to assist students through the application, admission and visa process prior to enrolling at UNI.

Here are the rights and obligations of JNTUK, Kakinada under this initiative:

- JNTUK, Kakinada is responsible for providing curriculum outlines for identified programs along with course descriptions and/or syllabi.
- JNTUK, Kakinada staff and administrators will be available to answer questions and provide additionally requested information regarding submitted curriculum and courses.
- JNTUK, Kakinada will collaborate with UNI on efforts to promote the Transfer Pathway Program to future and current JNTUK, Kakinada students in majors the program is

available. This may include, but not be limited to, student information sessions, virtual and in-person recruitment activities, advertising and social media presence, and pre-departure events as reasonably determined and/or required.

- JNTUK, Kakinada shall provide accurate and complete information relating to UNI to potential students before they transfer, including but not limited to application requirements, application process, cost, UNI's basic information, and intensive English training options through UNI, in accordance with the information and advice provided by UNI.
- JNTUK, Kakinada will advise students who are studying in majors that do not offer a Transfer Pathway Program on opportunities to study in other short-term or degree programs at UNI.

Article 4: Intensive English Opportunities

UNI's Culture and Intensive English Program (CIEP) provides online and in-person intensive English language course options to JNTUK, Kakinada students who do not meet the minimum admission English requirement (*Appendix B*) or who are interested in strengthening their English skills.

1. CIEP will provide a scholarship of not less than 10% of total CIEP tuition to students from JNTUK, Kakinada enrolling in the CIEP regular 8-week program for any portion of their studies at the University of Northern Iowa. The number of tuition scholarships for a single student or group of students will be determined by the CIEP.
 - If JNTUK, Kakinada students attend a minimum of two sessions within a semester (Spring or Fall), CIEP will offer one full-tuition scholarship for eight weeks for the following semester or summer session (one session).
2. CIEP will customize programs with a specific focus, as appropriate, based on JNTUK, Kakinada student needs, and CIEP's resources availability. The students may be integrated into the regular program or instructed as a separate cohort and have a curriculum designed for their needs. Upon approval of both parties, the CIEP will arrange airport pick-up service, cultural activities, transportation for field trips, orientation, and/or room and board accommodations, as agreed upon. The proposal will include program cost and itinerary.
 - The CIEP will offer a 100% discount on tuition for up to 1 chaperone leading a group of at least 10 students who are participating in CIEP Immersion Programs. The chaperone must be a faculty or staff member of JNTUK, Kakinada.
 - Arrangements concerning specific details of financial support will be made by individual written agreement applicable to each particular situation or immersion program.

Article 5: Implementation of the Agreement

3. The implementation of any specific program shall be subject to mutual consent, availability of funds, and approval of each institution. The terms of such mutual cooperation shall be discussed and agreed upon in writing by both institutions prior to the initiation of any particular program of activity.
4. Both Parties agree that each program shall be negotiated and coordinated between the international offices from both Parties and any other relevant office(s) of the Parties.
5. Both Parties accept that financial arrangements shall be negotiated in each case, as appropriate.
6. The names, crests and logos of the institutions are the intellectual property of those institutions, and may not be used without the express written permission of the institution that owns a particular name, crest or logo.

Article 6: Validity of the Agreement

1. This Agreement shall be in full force and effect from the date of signature hereof for a period of five years. At that time, the agreement shall be reviewed and, upon mutual agreement, extended for a further period.
2. Either institution may terminate this Agreement at any time by giving six months' notice in writing to the other institution.
3. In the event of termination, the programs underway shall be allowed to complete according to the terms that have been agreed upon.
4. In the event of any dispute, the Parties shall resolve such disputes through friendly consultation.

The clauses of this MoU may be revised or changed only upon consent of both Parties. The proposed alterations which have been agreed upon shall be presented by the Parties and signed by the representatives of both universities.

The undersigned agree to this Agreement on behalf of their respective Universities:

For the University of Northern Iowa:

Signature Mark A. Nook

Date 2022 August 5

Dr. Mark A. Nook
President
The University of Northern Iowa

For the JNTUK, Kakinada

Signature WM

Date 2022 August 24

Dr.G.V.R.Prasada Raju
Vice-Chancellor
JNTUK, Kakinada

APPENDIX A - Transfer Evaluation

Course Structure Framework at University of Northern Iowa for a 3+1 Electrical Engineering Technology (EET) Program with Jawaharlal Nehru Technical University at Kakinada, India

Suggested credit hours at UNI: 33 credit hours.

- The required credit hours for the Electrical Engineering Technology program is 126 credit hours at the University of Northern Iowa and the University policy requires at least 32 credit hours taken at UNI.
- Students from JNTU at Kakinada can finish all required credit hours in one year by taking 18 credit hours in Fall and 15 credit hours in Spring semester after transferring credits to UNI.

Courses taken at UNI (33 credit hours including minimum of 6 EET content required courses):

EET major courses (18 credit hours):

- TECH 3160 Computer-aided Instrumentation and Interfacing (3)
- TECH 4103 Electronic Communications (3)
- TECH 4104 Applied Digital Signal Processing (3)
- TECH 4165 Wireless Communication Networks (3)
- TECH 4220 Senior Design (3)

Required Technical Writing (3 credit hours):

- English 3772 Technical Writing for Engineering Technologists (3)

UNI Foundational Inquiry (UNIFI) General Education Courses (15 credit hours):

- Oral Communications (3)
- Human Condition – Domestic (3)
- Human Expression (3)
- 2 Connect Courses (Elective) (6)

*The above UNIFI evaluation is dependent on both the Constitution of India OR Essence of Indian Traditional Knowledge and Environmental Science courses receiving credit from the issuing institution to be given UNIFI credit. Please see the note in the transfer credit table.

Plan of Study:

Fall semester (18 credit hours):

- TECH 4103 Electronic Communications (3)
- TECH 4165 Wireless Communication Networks (3)
- English 3772 Technical Writing for Engineering Technologists (3)

- UNIFI courses (9)

Spring semester (15 credit hours):

- TECH 3160 Computer-aided Instrumentation and Interfacing (3)
- TECH 4104 Applied Digital Signal Processing (3)
- TECH 4220 Senior Design (3)
- UNIFI course (6)

Courses transferred from **JNTU at Kakinada** that will substitute for the courses required by the **EET** program at UNI (at least **93** credit hours):

Equivalency or Substitution			
JNTU at Kakinada		University of Northern Iowa	
Course No.	Course Name & Credit Hours	Course No.	Course Name & Credit Hours
<i>Mathematics and Science Core Courses (22 credit hours)</i>			
	Mathematics – I (Calculus) (3) Mathematics – II (Linear Algebra and Numerical Methods) (3) Mathematics – III (Transforms, PDE and Vector Calculus) (3)	MATH 1420 MATH 1421	Calculus I (4)** Calculus II (4)
	Mathematics – IV (Complex Variable and Statistical Methods) (3)	STAT 1772	Introduction to Statistical Methods (3)**
	Programming for Problem Solving Using C (3) Programming for Problem Solving Using C Lab (1.5)	CS 1160	C/C++ programming (3)
	Applied Physics (3) Applied Physics Laboratory (1.5) Thermal and Hydro Prime Movers (3) Thermal and Hydro Prime Movers Lab (1.5)	Physics 1511 Physics 1512	General Physics I (4)** General Physics II (4)
	**double count for both UNIFI and EET math and science core (11)		
<i>Required Technical Core Courses (36 credit hours)</i>			

	Electrical Circuit Analysis –I (3) Electrical Circuit Analysis –II (3) Electrical Circuits Lab (1.5)	TECH 1037 TECH 1039	Intro. to Circuits (3) Circuits and Systems (3)
	Induction and Synchronous Machines (3) Induction and Synchronous Machines Lab (1.5) Digital Electronics (3) Digital Electronics Lab (1.5) Electronic Devices and Circuits (3) Electronic Devices and Circuits lab (1.5) DC Machines and Transformers (3) DC Machines and Transformers Lab (1.5) Skill advanced course- Courses offered by Siemens Centre of excellence : (2)e AUTOMATION LAB- Basics of PLC, Basics of SCADA/ ELECTRICAL & ENERGY STUDIES LAB- Basics of Low Voltage Switchgear. Basics of Induction Motor/ PROCESS INSTRUMENTATION LAB- Basics of Process Instrumentation	TECH 2038 TECH 2042 TECH 3156 TECH 2041 TECH 3152 TECH 3164	Introduction to Electrical Power and Machinery (3) Introduction to Digital Electronics (3) Advance Digital Electronics (3) Introduction to Analog Electronics (3) Advanced Analog Electronics (3) Programmable Logic Controllers (PLCs) (3)
	Power System-I (3) Power Systems-II (3)	TECH 3166	Advanced Electrical Power Systems (3)
	Control Systems (3) Control Systems Lab (1.5)	TECH 3129	Linear Control Systems (3)
	Microprocessors and Microcontrollers (3) Microprocessors and Microcontrollers Lab (1.5)	TECH 3157	Microcontroller Applications (3)
	Power Electronics (3) Power Electronics Lab (1.5)	TECH 4167	Power Electronics Applications (3)
UNIFI courses (22 credits)			
	Mathematics I (Calculus) Managerial Economics & Financial Analysis		Quantitative Reasoning (3) Connect Course (Elective) (3)

	Communicative English/Skills Lab Mathematics IV Applied Physics/Lab		Written Communication (3) Connect Course (Elective) (3) Scientific Reasoning w/lab (4)
	Constitution of India OR Essence of Indian Traditional Knowledge* Environmental Science *		Human Condition (Global) Responsibility * These courses will only transfer for UNIFI credit if the Kakinada transcript shows them as credit- bearing courses.
Elective course (at least 24 credit hours)			
	Electro Magnetic Fields (3) Power System Analysis (3) Power Systems and Simulation Lab (1.5) Electrical Engineering Workshop Lab (1.5) Data Structures Through C (3) Data Structures through C Lab (1.5) Engineering Drawing (3) Python Programming (3) Python Programming Lab (1.5) Electrical Measurements and Instrumentation (3) Electrical Measurements and Instrumentation Lab (1.5) Skill oriented course- Design of Electrical Circuits using Engineering Software Tools (2) Skill advanced course- High Voltage Lab (2) PEC courses		University Electives

APPENDIX B - Admission and Enrollment Information

English Language Requirement: Students must show proof of English proficiency to gain full admission to UNI. Approved exams include TOEFL (79 (iBT), IELTS (6.5), Duolingo (105) as well as other options listed at <https://admissions.uni.edu/International/english-proficiency>

Annual Cost: The budget for a full-year of studies at UNI, including tuition and fees, housing and meals, and other required expenses can be found at <https://admissions.uni.edu/international/tuition-fees> Costs are subject to change on an annual basis.

Scholarships: The students at JNTUK Kakinada are eligible to apply for scholarships within UNI's scholarship program - <https://admissions.uni.edu/international/undergraduate-students/scholarships-aid> The parties shall make efforts to provide additional funding to support students covered by the present agreement with scholarships.