

# Annexure - 77



## MEMORANDUM OF AGREEMENT

BETWEEN

MADANAPALLE INSTITUTE OF

TECHNOLOGY & SCIENCE

&

ASIA UNIVERSITY

TOWARDS

MUTUAL COOPERATION IN

ACADEMIC & RESEARCH

WORK

FOR 1 YEAR at MITS+1 YEAR at AU MASTERS PROGRAM

1. This Memorandum of Agreement (MoA) signed on the 7<sup>th</sup> day of the July month Two Thousand Twenty Three between Asia University,(represented by Prof. Ching-Hsien Hsu) Wufeng District of Taichung City, Taiwan (hereinafter referred to as AU) and Madanapalle Institute of Science & Technology (represented by Dr C. Yuvaraj), an Autonomous Institute and Affiliated to JNTU Anantapuram Madanapalle, Andhra Pradesh, India, (hereinafter referred to as MITS) for the purpose of synergizing the resources and the expertise of AU with MITS to create skilled workforce in the area of electronic design and manufacturing in line with India's focuses & scope for rapid development in the integrated chip manufacturing industry. This MoA also aims to promote the mutual cooperation between the two parties, with AU endeavouring to provide the best quality education & training services to students and faculty of MITS in areas of mutual interest and applications, with AU hosting MITS faculty & students at AU for joint research & development.

#### **PREAMBLE**

#### **2. ASIAUNIVERSITY(AU), TAIWAN**

ASIA UNIVERSITY (AU) is a private, comprehensive and research-intensive university, founded in Wufeng District, Taichung City, Taiwan, in 2001, with the goal of establishing a world-renowned university. According to Karl Jaspers, a German philosopher, an ideal university must have three features-- academic teaching, scientific research, and a creative cultural life, which are exactly what AU has been pursuing since its establishment.

Over the past 20 years, AU has demonstrated excellence in academic performance, and was ranked the first place in many of the higher education evaluations conducted by the Ministry of Education (MOE), Taiwan. AU was not only ranked one of the best among newly-established universities in Taiwan, but also granted with huge funding for the honored projects collectively called the Program for Promoting Teaching Excellence Universities from the MOE for 13 years consecutively. Meanwhile, AU has achieved international reputation and accolade by several world university rankings, including *Times Higher Education World University Rankings*, *Shanghai Academic Ranking of World Universities*, *USNews & World Report Global University Rankings*, and *QS Global University Rankings*. Based on the *Times Higher Education*, Asia University was one of the top100 best universities in the world younger than 50 years.

#### **3. Madanapalle Institute of Technology & Science (MITS), Andhra Pradesh, India**

Madanapalle Institute of Technology & Science is established in 1998 in the picturesque and pleasant environs of Madanapalle and is ideally located on a sprawling 26.17-acre campus on Madanapalle - Ananthapuramu Highway (NH-205) near Angallu, about 10 km away from Madanapalle and 120 km from Bangalore Airport.

MITS, is an Academic Institute under the Trust of Ratakonda Ranga Reddy Educational Academy and the Founder is Dr. N. Vijaya Bhaskar Choudary, Ph.D., Secretary & Correspondent of the Academy.

The Institute has around 7000 Students, 350+ Teaching Faculty, among which around 200 Faculty members are with Ph.D qualification from many renowned Indian and foreign Universities. It has bench-marked its curriculum and teaching methodologies with premier Indian Institutes to maintain academic excellence. MITS offers 11 Under Graduate Engg., MCA and MBA programmes. Most of the programs have been accredited by National Board of Accreditation under Washington Accord. MITS has also been accredited with A+ under National Assessment & Accreditation Council for its quality education.

MITS curriculum has introduced summer internships, Mini Projects, Full Semester Internships for the benefit of the students. 56 of our B. Tech students got selected for University Innovation Fellowship program (UIF) of Stanford University. MITS has **19 MoUs** of which, 8 MoUs with Taiwan Universities, 2 Japanese Universities, 3 South Korean Universities and 5 MoUs with European Universities and 1 Russian University,

MITS has grown over the years to become one of the premier institutions in Andhra Pradesh that students aspire to join. Governed by the progressive thoughts of the Management, MITS is always striving conscientiously to excel in various domains of Academics, Research, Contribution to Society by fostering collaborations with Global Academic and Industry. An excellent Academic atmosphere and hi-tech facilities are created for the Faculty and Students for pursuing their professional career and personal goals.

#### **PURPOSE**

4.MITS recognizes the importance of creating a talent pool of engineering graduates at the Post Graduate and Under Graduate level in the emerging discipline of electronics design and manufacturing. Such graduates have to be employable by the industry with the requisite skills to success in the integrated- circuit/semiconductor industry. The focus of the Indian Government has been to attract capital in this niche industry that can make India a global semiconductor manufacturing hub. To augment this, one of the main requirements is human capital and there is a huge need for well qualified workforce in this niche semiconductor design & manufacturing industry.

The purpose of this collaboration would be to synergize the expertise of AU to create a pool of qualified engineering professionals who can work in the Indian semiconductor design & manufacturing industry. The collaboration also aims to motivate the students to join the Master's Program VLSI Design Engineering and also to give an opportunity to the existing undergraduate MITS students of Electronics & Electrical Engineering to complete an intensive course work & internship at AU for a period of five/ six months respectively, as part of their final year full semester internship.

5. This MoU is subject to at all times to mutually applicable as rules as applicable to MITS & AU and any disputes shall be resolved by a mutually agreeable mediator/arbitrator and the location of dispute resolution shall be Bangalore, India.



6. NOW, THEREFORE, in consideration of the mutual promises made herein and of good and valuable consideration, the receipt and sufficiency of which both MITS & AU here by acknowledge, and further MITS & AU hereby agree to sign a Memorandum of Agreement (MoA).

**ARTICLE-I: SCOPE OF THE MoA**

7. This MoA details the modalities and general conditions regarding the collaboration between MITS & AU. To begin with, the following shall receive immediate focus from MITS & AU:

- i) Full-time course-work at AU as part of MITS's M.Tech programme in VLSI Design for the batch starting from 2024-25.
- ii) AU faculty mentoring in-school project work at AU advanced facilities
- i) AU faculty mentoring for 20-24 weeks' industry internship in semiconductor industry facilities.
- ii) Periodical industrial visit including the state of the art National Labs established by NSTC, Taiwan
- iii) Basic Orientation to the Mandarin Language

MITS shall admit students to its M.Tech. programme in VLSI Design beginning from the academic year 2024-26. Such students shall complete the requisite course and lab work during the 1<sup>st</sup> and 2<sup>nd</sup> semester of the programme in MITS. On completion of their first year, students shall be visiting AU for their 3<sup>rd</sup> & 4<sup>th</sup> semester. The 3<sup>rd</sup> semester shall comprise course-work as jointly prescribed by AU & MITS to be delivered on a full-time basis by AU faculty at their university campus. The 3<sup>rd</sup> semester shall also include a in-school project mentored by AU faculty using the advanced facilities in the AU departments related to VLSI Design & Applications. The 4<sup>th</sup> semester may be a 20 to 24-week **Industry Internship** to be arranged by AU for the students whom a work full-time to gain hands-on experience & learning at the semiconductor industry facilities. On successful completion of the course work and internship at AU, the AU credits earned shall be transferred to them to graduate with a M.Tech degree in VLSI Design of MITS/JNTUA.

The following are the major facilities with regard to the electronics design and manufacturing focused curriculum of the VLSI degree programme that AU shall provide access during their in-school project to the students from MITS:



### **Semiconductor thin films laboratory**

Spin coater : the deposition of thin films is carried out by spin coating at a high spinning speed.

Controlled-atmosphere furnace : the semiconductor films are annealed in a tubular atmosphere furnace filled with inert gas, and the partial pressure of oxygen in the tube is controllable.

Current–voltage (IV) measurement system : the instrument, which can be used on wafer and semiconductor thin film, serves as an effective identify tool.

Hall effect measurements instrument : this system can identify the electrical features of resistivity, carrier mobility, concentration, and Hall coefficient. The measured parameter of magnetic field is 0.6T at room temperature.

Hewlett Packard (Hp) - 4156A precision semiconductor parameter analyzer

Bausch & Lomb, MicroZoom2, High performance microscope (Model:6100)

The following are the potential industry partners that AU shall coordinate with and ensure that the 20-24-week internship is arranged for the visiting students of MITS

Everlight Electronics Corporation, Taiwan

Vanguard Semiconductor, Taiwan

Nuvoton Technology Corporation, Taiwan

Channel Well Technologies, Taiwan

Taiwan Semiconductor Manufacturing Company, Taiwan

Micron Memory Taiwan Co., Taiwan

Macronix International Co., Taiwan

United Microelectronics Corp., Taiwan

Technology Bridge Corporation, Taiwan

Wistron, Taiwan

8. MITS shall do all the necessary for admitting students to the M.Tech. programme in India and shall jointly promote this as a MITS + AU initiative. There shall be no costs for AU towards the promotion & enrolment of students.



9. All the above will be done by both parties without any prejudice to prevailing rules and regulations in MITS and AU nor without any disregard to any mechanism evolved and approved by the competent authorities of MITS & AU.

The area of cooperation can be extended through mutual consent.

#### **ARTICLE-II: SCOPE AND TERMS OF INTERACTIONS**

10. Besides a continuous interaction between the faculty & students in the VLSI discipline, both MITS & AU shall encourage interactions between the faculty in various other disciplines of engineering, sciences, management, etc. through the following arrangements: -

- a. Faculty visits for identification of joint research projects
- b. Student visits for course work or internship and other areas of study
- c. Participation in conferences, seminars, workshops, academic discussions, etc.
- d. Joint development of online courses and such other matters of academic & research importance.

11. There is no limit with respect to the number of such interactions and the number of persons involved (unless agreed upon in advance). However, the modalities involved including costs, stay, etc. shall be worked out on a mutually agreeable basis.

12. MITS & AU may request to design and teach a course or courses which it deems fit to enhance quality and performance of its students. Such courses may be run at any mutually convenient premises.

(a) The representative shall meet as needed to discuss the programmes, changes to programmes and any other topics of interest to either party.

(b) Joint Research/ Development / Training projects. Technology transfer and help on specialized areas of mutual interest.

(c) Practical training of students using online/simulation tools where it is feasible.

(d) Joint guidance of student projects/ thesis in areas of mutual interest of MITS & AU on mutually agreeable terms.

€ MITS may showcase its activities at the seminar/ workshop/conference, etc. at MITS to attract students for other degree programmes at AU.

#### **ARTICLE-III: SHARING OF FACILITIES**

13. Both MITS & AU shall allow the sharing of facilities as per the following arrangements:

(a) MITS & AU shall make provisions to share their respective important facilities in order to promote academic and research interaction in the areas of co-operation.

(b) MITS & AU shall permit the sharing of software and other materials and components developed in-house in the areas of co-operations, if permissible within the rules governing the two institutions. However, responsibility for safety of software and other materials during the exchange will rest on respective Head of academic department / section.

(c) MITS & AU shall provide access to the library facilities, residential accommodation, dorm accommodation to scientists, members of faculty and students as per the prevailing rules and norms in the respective institutes.

#### **ARTICLE-IV CO-ORDINATION OF THE PROGRAMME INCLUDING FINANCIAL ARRANGEMENTS**

14.The collaborative programme between MITS & AU shall be coordinated by a coordination committee appointed by Directors /Heads of both Institutes.

15.Financial arrangements for each specific collaboration will be decided on a case-to-case basis and brought on record in each case after due approval from heads of both Institutions.

16.The candidates selected for course work & Internship in this specific M.Tech. VLSI would have to pay the tuition, hostel, participation and other fees as prescribed by AU from time to time for their 2<sup>nd</sup> year study at AU, Taiwan..

#### **ARTICLE-V: EFFECTIVE DATE AND DURATION OF MOU**

17.This MoU shall be effective from the date of its signing by the competent authorities of both parties.

18.The durations of the MoU shall be for a period of five years from the effective date unless terminated/ extended or updated prior to that date. An annual review will be conducted by both parties to verify accreditation status, update programme offerings and review programme delivery date.

19. During its tenancy, the MoU may be extended by a prior notice of not less than six months by either party. However, termination of the MoU will not in any manner affect the interests of the students / faculty / scientists who have been admitted to pursue a programme under the MoU.

20.In the event of noncompliance or breach by one of the parties of the obligations binding upon this MoU, the other party may terminate the agreement after giving a reasonable opportunity to explain their viewpoint.

21.Any clause or article of the MoU may be modified or amended by written mutual agreement of MITS&AU.

#### **ARTICLE-VI : INTELLECTUAL PROPERTY RIGHTS(IPR)**

**22. Applicability**: MITS & AU are individually referred to as the "Party" and collectively as the "Parties". The IPR is applicable to both Parties and their employees, students and representatives as well as personnel associated with any activity such as, but not limited to, Continuing Education Programme and covers different clauses of Intellectual Property viz Ownership, Copyright, Trade Mark, Service Mark, Design registration, Trade secret and Confidential Information.

**23. Ownership** : Intellectual Property (IP) of any kind created by visiting students /

faculty of MITS or AU during their period of study or work or collaborative engagement will be jointly owned by MITS & AU. However, if the IP was created with the significant use of funds or

Facilities administered by MITS or AU, then the IP ownership shall be shared on a pro-ratabasis based on mutual agreement.

#### **ARTICLE-VII: CONFIDENTIALITY**

24. During the tenure of the MoU both MITS & AU will maintain strict confidentiality and prevent disclosure of all the information and data exchanged under the scope of this MoU for any purpose other than in accordance with this MoU and offer written consent of the parties.

25. Both MITS & AU shall bind their respective personnel who come into possession or knowledge in any manner of any confidential information not to disclose the same to third parties without written approval of the disclosing party or use such confidential information for any use other than intended under this agreement or PROJECTS.

26. Further, both MITS & AU shall put in place adequate and reasonable measures to keep and store confidential information secure so as to prevent any unauthorized use.

#### **ARTICLE-VII: AMENDMENTS**

27. Any amendment and/or addenda to the AGREEMENT shall be in writing and signed by the PARTIES here to and shall only after such execution be deemed to form part of the AGREEMENT and have the effect of modifying the AGREEMENT to the extent required by such amendment or addenda.

#### **ARTICLE-IX : RESOLUTION OF DISPUTES**

28. This agreement shall take effect in good faith & spirit and is constructed in accordance with best practices in collaborative academic programmes between Indian & foreign higher education institutions.

29. In case any dispute/ claim arises between the parties with respect to the MoA including its validity, interpretation, implementation, or alleged breach of any of its provisions or regarding a question, including the questions as to whether the termination of this MoA by one party hereto has been legitimate, both parties here shall endeavor to settle such dispute amicably. If the parties fail to bring about an amicable settlement within a period of 30 days, disputes shall be referred to the sole arbitrator appointed mutually by MITS & AU. Arbitration proceedings shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and rules made there under, or any legislation amendment or modification made thereto.

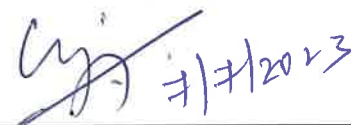
The venue of arbitration shall be Bangalore, India. The award given by the arbitrator shall



be final and binding on the parties. The language of arbitration shall be English. The common cost of arbitration proceeding shall initially be borne equally by the parties. Any other costs or expenses incurred by a party in relation to the arbitration proceedings shall ultimately be borne by the party as the arbitrator may decide.

**IN WITNESS WHEREOF PARTIES HERE TO HAVE ENTERED INTO THIS AGREEMENT EFFECTIVE AS ON THE DATE AND YEAR FIRST WRITTEN ABOVE.**

**For Madanapalle Institute  
of Technology & Science**

  
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**Dr. C. Yuvaraj** Principal  
**Madanapalle Institute of  
Technology & Science  
MADANAPALLE**

Witness

  
\_\_\_\_\_  
07/07/2023

**Prof. Sremmant Basu**

**Dean Admin, International Relations &  
HoD- Management Studies**

**Madanapalle Institute of Technology  
& Science**

**Madanapalle, 517 325, Andhra Pradesh**

**India**

**Official Seal**




**For ASIA UNIVERSITY**

  
\_\_\_\_\_  
**Dr. Ching-Hsien Hsu**

**Dean of College of Information  
and Electrical Engineering**

Witness

  
\_\_\_\_\_  
07/07/2023

**Prof. Yinghuei Chen**

**Dean International College,  
Chair Professor in Language &  
Literature**

**ASIA University**

**Taichung City, Taiwan**

**Official Seal**