

**St. Theresa institute of Engineering & Technology**  
**2<sup>nd</sup> Shift Polytechnic**

(Approved by aicte, Recognized by the Govt, of A.P & Affiliated to SBTET,AP Hyderabad))  
**Garividi, 5351011, Vizianagaram Dist.**

**MEMORANDUM OF UNDERSTANDING**  
Between



**St. Theresa institute of Engineering & Technology**

2<sup>nd</sup> Shift polytechnic, Garividi-535101, Vizianagaram Dist.  
( Approved by AICTE, New Delhi & SBTET, Govt. of A.P, SBTET, Hyderabad)  
**Garividi, 535101, Vizianagaram Dist.**

This Memorandum of Understanding (hereinafter referred to as "MoU") is entered into this agreement on this day 02.02.2021 by and between.

**Center of Excellence in Maritime & Ship building ( hereinafter referred to as CEMS) Located at Cheepurupalli,garividi,535101** Vizianagaram dist. India is a well-funded startup in skill development for imparting training with industry 4.0 focus on advanced Design, Automation, Manufacturing and Maintenance, Repair & Overhaul(MRO) domains which caters for all industrial sectors. It is promoted by Indian Register of Shipping in partnership with Siemens and support from Sagarmala, Ministry of Shipping/Govt. of India with an aim to provide globally relevant skilled technical manpower in the latest manufacturing technologies for ship building/repair and high end manufacturing sectors.

CEMS is a dedicated Centre for facilitating professional development and skill enhancement in maritime, infrastructure and manufacturing sectors. It is aimed to build competency in manufacturing industry with industry 4.0 focus by imparting right skills and create skilled manpower pool to cater to current and future industrial landscape of the country, thereby providing better employment opportunities to students and work force. CEMS is hereafter referred to as First Party

**AND**

**Avanthi St.Theressa Institute of Engg&Tech,** (Hereinafter referred to as ASTIET) located at Cheepurupalli ,Garividi (m) vizianagaram Dist., Andhra Pradesh 530041, is a well established institution under Alwardas Group of Educational Institutions, Visakhapatnam with a motto of providing quality engineering education in a highly disciplined environment with good standards, along with character building of students who will be able to stand up to the challenges of the present employment market with a vision to foster prosperity through technological development by means of education, innovation and collaborative research and emerge as a premier technical institution. SPC is a pioneering Institution of Higher Education in India with Potential for Excellence. The portal of this great temple of learning has welcomed intellectual, cultural and social giants from the length and breadth of the Country who left indelible footprints on the sands of time making SPC a proud alma-mater. SPC is hereafter referred to as Second party.

Whereas the first party CEMS, Visakhapatnam, will provide above 50 courses across 18 specializations; covering 770 modules out of which 271 will be tools and algorithm based courses while 500 will be process and sector based.

And whereas the second party ASTIET, Garividi Engineering & Diploma Institute is an Educational Institution providing education in various Diploma Programmes including certificate courses in Engineering

affiliated to State Board of Technical Education and Training, A.P., and approved by AICTE, New Delhi. It has the vision and mission to impart quality education of good standards with a major focus on conducting skill development and outreach programmes.

### **GENERAL Agreement**

In order to facilitate industry-institute interaction for technical advancement, to develop academic and industrial relationships and support collaborative research activities, ASTIET and CEMS, agree to establish this Memorandum of Understanding (MOU) as a framework for mutual cooperative programs of Training.

### **ARTICLE I**

#### **Faculty Visits and Training**

It is agreed that linkages will be strengthened by visit of faculty from ASTIET to CEMS and CEMS faculty to AICTE. The purpose of the visits by the faculty is primarily to facilitate the following:

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1. Training of ASTIET faculty by member of CEMS on Design, Advanced Manufacturing and as well as on Automation and MRO
2. Training and exposure of faculty with focus on Industry 4.0 Skills
3. Assist faculty and students of ASTIET for project studies.

Arrangements for each such visit will be made by SPC. Purpose, timing and other details concerning these exchanges and short visits in this regard shall be mutually acceptable to both the institutions. It is agreed that information concerning the purpose and duration of the visit by the faculty, the proposed topics of study, details of the personnel visiting and any further details, as required, will be provided to CEMS by SPC at least two weeks prior to the proposed visit.

CEMS will be Conducting Orientation Programs to Faculty Free of Cost and Faculty Development Training in various domains will be at mutually agreed cost.

### **ARTICLE II**

#### **Student Training**

Further to the above, it is also agreed that CEMS will support and facilitate visits of groups of students from ASTIET.

- \* The purpose of these visits by the students is as follows:
- \* Industrial visits at III year level to study and understand functioning of an industrial establishment
- \* Industrial visit at III year level to undertake mini-projects and pilot studies for full-fledged projects

A. As in the case of Article I, arrangements for each such visit will be made by ASTIET in the form of formal letters seeking permission as well as the convenience of CEMS to send the student groups. Purpose, timing and other details concerning these exchanges shall be mutually acceptable to both the institutions. It is agreed that information concerning the number of students visiting, duration of the visit, the proposed topics of study and any further details, as required, will be provided to CEMS by ASTIET at least two weeks prior to the proposed visit.

**ASTIET agreed to send minimum 100 students in a academic year for Industrial Training of Final year Diploma Students CEMS on chargeable basis.CEMS**

will charge course fees for conducting various courses will be decided mutually. The course fees will include training fees and cost of consumables used for training. Cost of Raw Material required for projects, where applicable will be borne by the Students. Study material soft copy will be provided to the trainees, The trainees will have access of the Presentations for 90 days from course commencement. Accommodation, if needed by the students can be arranged in CEMS hostel at nominal fees of Rs 300 for accommodation and Rs 200 for breakfast, lunch and dinner. The accommodation is sharing type and can be made available on prior intimation only.

**A. Trainings available for Diploma Students on various technologies available at CEMS Centre's.**

B.

1. Short term courses
2. Diploma & Certificate courses
3. Weekend / semester vacation courses
4. Training for pass out students.
5. Faculty Development Program at ASTIET Garividi
6. Customized courses for students & faculties as per the requirement
7. Availability of Labs for undertaking Industry Projects and experiments.
8. Teaching staff or research scholars of the participating institute can use resources of CEMS for their thesis work.

CEMS and ASTIET have mutually discussed and agreed to enter into this agreement as ailed now therefore, in consideration of the mutual promises contained herein and other good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

1. The course fee for each of the course will be decided mutually. Fees will be revised in Mutual Discussion with the college Representatives
2. The participating College shall provide the students of its College as per the time table decided for the course enrolled by its students. The participating College will treat

the time spent by its students at CEMS as regular attendance for its academic regulations.

3. The participating College shall provide its transport facility to students wherever possible to attend CEMS classes. Otherwise transportation will be responsibility of students.

4. CEMS shall collect the course fee either directly or the participating institute can collect the fee and remit it to CEMS.

NEFT/RTGS DETAILS FOR REMITTANCE OF FEES:

BANK NAME	ICICI BANK
A/C NAME	CENTER OF EXCELLENCE INMARITIME & SHIP BUILDING (CEMS)
A/C NO	A/C NO-126901000796
BRANCH	HSL
IFRC CODE	

**Center of Excellence in Maritime & Ship Building Visakhapatnam**, has excellent infrastructure and qualified trainers and man power to impart skill training and to offer Diploma and Certificate courses as follows: -

Sl.No	Course	Modules covered	Eligibility
1.	3D CAD	<ul style="list-style-type: none"> <li>• Essentials for Designers,</li> <li>• Sketching Fundamentals,</li> <li>■ Synchronous Modeling Fundamentals ,</li> <li>• NX Sheet Metal,</li> <li>■ Drafting Essentials,</li> <li>• Intermediate Design &amp; NX Assemblies,</li> <li>• Advanced Assembly Design / Large Assembly Management,</li> <li>• Class A Free Form Modeling/ Mechanical Free Form Modeling</li> <li>• Engine Design,</li> <li>■ Synchronous Modeling and</li> </ul>	

		Parametric Design, ■ Routing Mechanical, • Routing Electrical	
2.	CAE & NVH (Noise Vibration & hair shines)	• CAF: Advanced Simulation Process & Solutions, ■ Thermal & Flow Analysis, ■ Motion Analysis, ■ Laminate Composite, • Advance Thermal & Flow Analysis, ■ Advanced Finite Element Analysis (FEA), ■ NVH- Vibration Measurements and Analysis, • Modal Testing and Analysis, • Acoustics Measurements and Analysis,	
3.	PLM	Essentials for Designers Advanced Simulation process	
4.	Robotic & DM	Techno matrix-process Techno matrix -Rob cad Techno matrix- Flow Industrial Robotics Basics –KUKA Robotic Application -1)material Handling 2)MIG Welding 3) PLASMA Cauting.	
5.	Mechatronics Concept Design(MCD)	PIC Programming Essential for Designers MCD. HMI Mechatronica	
6.	CAM& CNC	NX CAM Manufacturing Fundamentals NX CAM Turning Manufacturing Process Turning NC Programming Milting NC Programming TURNING –Operating and machining MILLING –Operating and Machining	

7.	Maintenance Repairing & Overhaul	Welding Pneumatics Hydraulics Pumps Piping System	
8.	Industrial Automation & Mechatronics	PLC programming HMI & NET WORKING Designing SCADA System Mechatronics	
9.	Process Automation	PLC programming HMI & NET WORKING Designing SCADA System & Process Instrumentations.	
10.	Mechatronics concept Design.	PLC programming Essentials for Designers MCD HMI & NETWORKING Mechatronics	
11.	Mechatronics Conpect Design (MCD)	PLC Programming HMI & NET WORKING Designing SCADA System Process instruments Simatic PCS 7 Basis	
12.	Electrical Drives & Switch gears	AC/DC Drives Low voltage Switch gear Power Systems Induction Motors.	

#### Certificate Course.

Lab	Domin	Course Title	Total Duration Hours
Product Design and Validation (PDV)	CAD	Essentials for NX Designers	40
		Sketcher fundamentals	16
		Drafting essentials	24
		Synchronous Modeling Fundamentals	16
		Synchronous modeling and parametric Design	24
		Intermediate design & NX	40

		Assembles	
		NX Sheet Metal.	16
		Class a free from modeling /mechanical free from Modeling.	40
		Advanced Assembly Design /large Assembly Management	24
		Routing metal	16
		Routing Electrical	16
	CAM	NX CAM Manufacturing Fundamentals	16
		NX CAM Turning <u>Manufacturing Process</u>	32
	CAE	Advanced Simulation	40
		Thermal and Flow Analysis	24
		Laminate Composites	8
		Motion Simulation	24
		Advanced Finite Element <u>Analysis (FEA)</u>	20
	PLM	Using Team center	32
		Team center Installation	40
		Team center Integration for NX users	8
		Schedule Manager	16
		TC Application & Data Model Administration	40
		Mock-up	24
	DM	Tecnomatix — Rob CAD	32
		Tecnomatix — Flow	40
		Tecnomatix — Process	48
	T&O	Vibration Measurements and Analysis	20
		Model Testing and Analysis	30
		Acoustics measurement and Analysis	20
Research machine shop	CNC	Turning numerical control programming	32
		MILLING-Numerical Control Programming	32
		Turning operating and Machining	32



		Milling operating and machining	32
Auto machine	Auto machine	Basic of PLC	50
		Hmi & Net working	40
		Basics of SCADA	50
Mechatronics	Mechatronics	Basics of ,Mechatronics	50
Welding Technology	WELDING	WELDING	60
Robotics	Robotics	Industrial Robotics Basics-KUKA	40
PROCESS Instruments	PROCESS Instruments	Basics of Process Instruments	40
Electrical	Electrical	Basics of induction Motors	40
		Basics of AC-DC Drives	40
		Basics of low voltage Switch gear	40
		Basics of power systems	40
Pneumatics Hydrululics	MRO	Pneumatics	60
		Hydraulics	60
Radar Systems	MRO	PUMPING SYSTEM Piping system	40
		Radar Systems	50
Dimensional Accuracy and Control System	Marine	Dimensional Accuracy and Control System	40
Nesting productivity improvement lab		Nesting Productivity Improvement Lab	40
Hull Design		Hull Design	120

### ARTICLE III

#### Courses: Seminars, Workshops, Refresher Courses

It is agreed that ASTIET will arrange periodic seminars, workshops and refresher courses in collaboration with CEMS. The purpose of these courses is to facilitate and maintain on-going Industry-Institute Interaction as well as provide a forum for faculty of ASTIET as well as those of institutions in the vicinity to discuss on topics of current interest both to SPC as well as CEMS. Experts from CEMS as well as faculty from ASTIET with significant exposure in the topic of interest will coordinate and conduct these courses.

Arrangements for such courses will be made by ASTIET in keeping with the convenience of experts from CEMS. Purpose, timing and other details concerning these courses shall be mutually acceptable to both the institutions. It is agreed that information concerning the duration of the visit, the proposed topics of the course and any further details, as required, will be mutually discussed by ASTIET with CEMS by ASTIET at least one month prior to the schedule of the course or workshop

#### **ARTICLE IV**

##### **Cooperative ResearchIt is anticipated that significant**

opportunities, of which a few have been identified, exist for cooperative research between ASTIET and CEMS. Such clearly beneficial activities may require specific arrangements. In view of the importance of cooperative research, CEMS will provide necessary support to visiting faculty from ASTIET to study research problems at CEMS. Such problems will be analyzed and solutions suggested by ASTIET.

#### **ARTICLE V**

##### **Competence in Consultancy**

It is also anticipated that significant opportunities exist for taking up consultancy works with has state-of-th -art equipment ideally suited to taking up consultancy work for in ustr.

materials testing, machinability testing, fabrication of complicated parts, dynamic testing or equipment etc. CEMS will provide necessary assistance and guidance to ASTIET to develop such consultancy capabilities initially by working on challenges faced by CEMS and later extending the expertise gained to other industries

#### **ARTICLE VI**

##### **Exchange of Scientific Materials**

Both the collaborating parties agree to exchange as widely as is practicable such items as scientific publications and journals, college calendars, prospectuses, text books, course outlines and reference materials that may be necessary and of use to either party.

#### **ARTICLE VII**

##### **Duration of Memorandum of Understanding**

The effective date of this MOU shall be The MOU shall extend for a period of 3 (Three) years and may be renewed upon mutual written agreement. The MOU may be modified by mutual written agreement. The MOU may be terminated by either CEMS or by SPC with notification to the other party six months prior to the effective date of termination.

#### **ARTICLE VIII**

##### **Indemnification**

Centre of Excellence in Maritime & Shipbuilding (CEMS) and ASTIET shall each indemnify and hold harmless the other, its faculty/officers, agents and employees, for any and all liability, damages and costs attributable to the negligent acts or omissions of the indemnifying party, its faculty/officers, agents and employees while acting in the scope of their employment and in furtherance of activities described in this Memorandum of Understanding.

#### **ARTICLE IX**

##### **Liability Insurance**

Each party shall maintain its own insurance in amounts deemed appropriate for its operations. Such insurance shall provide coverage for negligent acts, errors, or omissions and provide protection against bodily injury or property damage claims. It is expressly understood that each party shall be solely responsible for its own actions and such insurance shall not extend to protect any other party.

#### **ARTICLE X**

##### **Conduct**

Each party shall abide by the rules and regulations of the host institution especially in regard to visits by the faculty/students of SPC to CEMS.

In witness here of, the Centre of Excellence in Maritime & Shipbuilding (CEMS), and Avanthi saint theressa ins& Technology & 2<sup>nd</sup> Shift Polytechnic College (ASTIET) have executed those presently in manner hereinafter mentioned on the 02 day of February 2021 at

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