



## **MEMORANDUM of AGREEMENT – MoA**

### **Double Master's Degree**

between

**Institut Teknologi Bandung ( Bandung, Indonesia )**

and

**Ecole des Mines de Nantes ( Nantes, France )**

This Memorandum of Agreement falls within the framework of the Memorandum of Understanding between the Institut Teknologi Bandung, hereafter referred to as ITB and Ecole des Mines de Nantes hereafter referred to as EMNantes, a member of the Institute Mines-Telecom.

#### **Article 1. Purpose of the MoA**

The purpose of this Memorandum of Agreement is to develop exchanges of students that will lead to the award of degrees of both institutions:

- The Master in Industrial Engineering and Management of Faculty of Industrial Technology - ITB
- The Master of Science and Technologies in Management and Optimization of Supply Chains and Transport - MOST - EMNantes

under the conditions specified hereafter.

## Article 2. Participating Bodies

The participating bodies will be ITB and EMNantes

The following liaison officers will be primary point of contact and persons responsible for the collaborative discussions:

For ITB  
Prof. Edwan Kardena, Director of International Relations

For EMNantes  
Dr Annya Réquillé, Dean of International Graduate School

## Article 3. Fields of study

All fields of study at each institution are potentially covered by this agreement. However, the compatibility of the respective programs must be confirmed and the programs and study paths on both sides approved prior to implementation in a particular domain.

## Article 4. Program structure for students from ITB

*Double degree :*

From ITB : Master in Industrial Engineering and Management,

From EMNantes : Master of Science and Technologies in Management and Optimization of Supply Chains and Transport - MOST

- The program structure is as follows:

| Year     |           | Master year 1                 |                               | Master year 2        |                               |               |
|----------|-----------|-------------------------------|-------------------------------|----------------------|-------------------------------|---------------|
| Semester |           | 1                             | 2                             | 1                    | 2                             |               |
| Month    |           |                               |                               | August               | Sept - Jan                    | Feb - Jul     |
| ITB      | Programme | Master programme year 1 sem 1 | Master programme year 1 sem 2 |                      |                               |               |
| EMNantes | Programme |                               |                               | French Summer School | Master programme year 2 sem 1 | Master Thesis |

Intensive and Extensive French Language and Culture courses are provided for students throughout their period of study in EMNantes during the 2<sup>nd</sup> year of Master from August to July.

An additional intensive 4 weeks French Language and Culture courses is offered to the students in July at EMNantes. The tuition fees will be clearly mentioned to the students.

- Conditions of attribution of the double degree

The double is awarded after:

- Successful completion of M1 (1<sup>st</sup> year of Master) at ITB and
- Successful completion of the intensive French Summer school program, the first academic semester of the M2 in one of the Master of Science and Technologies programs at EMNantes, with a 6 month Master thesis which meets the relevant requirements for degree-conferring.

For the duration of the double degree program students will be jointly registered at ITB and EMNantes.

The double degree will be delivered after the successful completion of studies in both institutions  
The general program of studies is detailed in Appendix 1.

### **Article 5. Arrangement of Academic Conditions**

Both institutions mutually recognize the credits that students acquired in the double degree program.

### **Article 6. Language of Instruction and Thesis**

All courses for this double degree program will be delivered in English in both institutions.  
Students enrolled in the double degree program are expected to write his/her thesis in English and the thesis must be submitted to both institutions for oral examination.

### **Article 7. Admission**

The students will be pre-selected by ITB based on the excellence of their academic records and will be recommended to EMNantes by ITB for admission to the Master of Science and Technologies programs at EMNantes.

The selection process shall then go through an evaluation, by EMNantes of the candidate's application (with regard to academic level, language ability and candidate's motivation).

The final decision for admission is decided by EMNantes, subject to its rules and procedures.  
Details of the application procedure will be clearly mentioned to the candidates.

### **Article 8. Costs**

#### **i. Tuition and fees**

*Double degree :*

|                 |   |
|-----------------|---|
| From ITB :      | Master in Industrial Engineering and Management,  |
| From EMNantes : | Master of Science and Technologies in Management and Optimization of Supply Chains and Transport - MOST |

Tuition fees will be paid by the students at the host institution, where they are studying:

- The first year of Master at ITB.
- The second year of Master at EMNantes including the intensive French Summer School module, the academic semester and the Master thesis.

ITB and EMNantes will clearly mentioned the tuition fees to the students.

#### **ii. Other costs**

Students must cover their own travel and subsistence expenses – housing, food, insurance etc.

ITB and EMNantes will clearly mentioned the living cost expenses and the facilities on campus.

**iii. Financial support**

ITB and EMNantes will actively seek for funding to cover partially or totally these tuition fees and/or living costs.

**Article 9. Annual meetings**

The persons responsible for the program at both institutions shall meet at least once a year within the frame of the general agreement of cooperation between the EMNantes and ITB in order to :

- Review effectiveness of the teaching programs
- Examine the academic results achieved by the students in the light of the institutions' joint efforts
- Review the domains and programs able to host students in the frame of the double-degree program
- Review the selection and admissions procedures and criteria
- Decide, each year, the number of students to be admitted to the double degree program.
- Discuss further actions

**Article 10. Effective Date and Length of MoA**

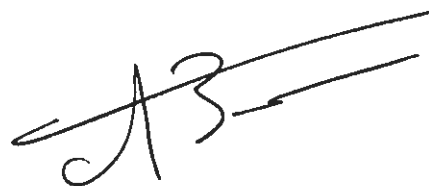
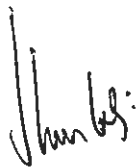
The Memorandum of Agreement will remain in force for a period of five years subject to the availability of funds. Any amendment and/or modification of the Memorandum of Agreement will require written approval by each partner institution's signing officer for Memorandums of Agreement. After the initial five-year period, this MoA will be renewed automatically unless written notice of termination is given.

Either party reserves the right to terminate this MoA upon six months' written notice to the other party. In this case, the program(s) or the activity(ies) already approved by both parties shall be allowed to be completed under the conditions of this MoA. In such event, the obligations of EMNantes and ITB towards the students, currently enrolled in a Double Degree program, will be carried out under the conditions of the present agreement.

This Memorandum of Understanding will take effect when signed by each side:

On behalf of ITB

On behalf of EMNantes



\_\_\_\_\_  
Professor Akhmaloka  
Rector of Institut Teknologi Bandung

\_\_\_\_\_  
Ms. Anne Beauval  
Director of Ecole des Mines de Nantes

Date: *March, 28<sup>th</sup>, 2013*

Date: *March, 28<sup>th</sup>, 2013*

## APPENDIX 1: Course Structure

*This course Structure is approved at the time of the signature.  
Master year 1 - ITB*

Table 1 Core Subjects

| No.           | Code   | Subject  | Number of Credits |
|---------------|--------|--|-------------------|
| 1             | TI5108 | Optimization Method  | 3                 |
| 2             | TI5109 | Statistical Data Analysis                                    | 3                 |
| 3             | TI5110 | System Methodology and Modelling                             | 3                 |
| 4             | TI6114 | Principles of Industrial Engineering and Management          | 2                 |
| 5             | TI6115 | Seminar of Research in Industrial Engineering and Management | 1                 |
| 6             | TI6205 | Research Method  | 3                 |
| 7             | TI70Z1 | Thesis   | 6                 |
| Total Credits |        |  | 22                |

Tabel 4 Core Subject for Industrial Management Specialization

| No.           | Code   | Subject                            | Number of Credits |
|---------------|--------|------------------------------------|-------------------|
| 1             | TI6208 | Advanced Statistical Data Analysis | 3                 |
| Total Credits |        |                                    | 3                 |

Table 6 Core Subject for Industrial System and Supply Chain Specializaion

| No.           | Code   | Subject           | Number of Credits |
|---------------|--------|-------------------|-------------------|
| 1             | TI6207 | Simulation System | 3                 |
| Total Credits |        |                   | 3                 |

Table7 Specialized Subjects for Manufacturing System Specialization

| No. | Code   | Subject                                    | Number of Credits |
|-----|--------|--|-------------------|
| 1   | TI5009 | Toyota Production System                   | 3                 |
| 2   | TI5221 | Design and Process Planning Automation     | 3                 |
| 3   | TI5222 | Quality Engineering                        | 3                 |
| 4   | TI5201 | Integrated Computized Manufacturing System | 3                 |
| 5   | TI5205 | Manufacturing Strategy                     | 3                 |
| 6   | TI5213 | Maintenance System                         | 3                 |
| 7   | TI5214 | Production System Network                  | 3                 |
| 8   | TI5215 | Computational Intelligence                 | 3                 |
| 9   | TI6123 | Industrial Robotics                        | 3                 |
| 10  | TI6124 | Lean Manufacturing                         | 3                 |
| 11  | TI6125 | Manufacturing Optimal Control              | 3                 |
| 12  | TI6126 | Scheduling Theory                          | 3                 |
| 13  | TI6127 | Simultaneous Engineering                   | 3                 |
| 14  | TI6128 | Realibility and Risk Engineering           | 3                 |
| 15  | TI6129 | Management of Modern SMEs                  | 3                 |
| 16  | TI6126 | Facility Planning                          | 3                 |
| 17  | TI6127 | Quality Planning and Control               | 3                 |

## Master year 2 MOST – EMNantes

| MOST           | MSc in Management and Optimization of Supply Chains and Transport                        | Year 1                        |          |
|----------------|--|-------------------------------|----------|
|                |  | Sem 1                         | Sem 2    |
| <b>CODE</b>    | <b>Scientific and Technical Modules</b>  | <b>European Credit - ECTS</b> |          |
|                | <b>▼ Fundamentals of Supply Chain Management and Optimization ▼</b>                      |                               |          |
| <b>ST111PO</b> | <b>Production and Operation management.....</b>  | <b>5</b>                      |          |
|                | Production management and planning   |                               |          |
|                | Procurement and Inventory Management   |                               |          |
|                | Supply Chains modelling using basic tools  |                               |          |
| <b>ST211OR</b> | <b>Operation research.....</b>   | <b>6</b>                      |          |
|                | Operations Research modelling and solving with software                                  |                               |          |
|                | Algorithmics : models development and solving in a computer language                     |                               |          |
| <b>ST311DM</b> | <b>Decision making with uncertainty and Simulation .....</b>                             | <b>5</b>                      |          |
|                | Probabilities and statistical decision making  |                               |          |
|                | Forecasting for supply chain demand planning   |                               |          |
|                | Simulation theory and applications to Supply Chains, production and transport systems    |                               |          |
|                | <b>▼ Industrial Engineering Management ▼</b>   |                               |          |
| <b>ST412ME</b> | <b>Supply Chains Performance Methods &amp; Evaluation .....</b>                          |                               | <b>5</b> |
|                | Management of Quality  |                               |          |
|                | Operational Efficiency   |                               |          |
|                | Supply Chains Performance evaluation   |                               |          |
| <b>ST512DS</b> | <b>Supply Chains Design &amp; Support.....</b>   |                               | <b>5</b> |
|                | Product Production System and Supply Chain design and management along life cycle        |                               |          |
|                | Maintenance and reliability of product and production system                             |                               |          |
|                | Selected topics  |                               |          |
|                | <b>Management Modules</b>  |                               |          |
| <b>SSG11EM</b> | <b>Introduction to Supply Chain Engineering and management .....</b>                     | <b>6</b>                      |          |
|                | Fundamentals of Supply Chain Management  |                               |          |
|                | Distribution and warehousing management and organization                                 |                               |          |
|                | Transport management and organization  |                               |          |
| <b>SSG11SP</b> | <b>Strategy and project management .....</b>   | <b>5</b>                      |          |
|                | Strategy of the firm   |                               |          |
|                | Project management   |                               |          |
|                | Intercultural project management   |                               |          |
|                | Communication and team work 1  |                               |          |
| <b>SSG12EF</b> | <b>Economics, Marketing, Finance and Organization .....</b>                              |                               | <b>6</b> |
|                | Economics, Finance & Accounting  |                               |          |
|                | Marketing  |                               |          |
|                | Human resources management   |                               |          |
|                | Organization of the firm and sociology of organization                                   |                               |          |
|                | Communication and Team Work 2  |                               |          |
| <b>SSG12PI</b> | <b>Purchasing, e-business &amp; Innovation .....</b>                                     |                               | <b>5</b> |
|                | Purchasing of goods and services for supply chain management                             |                               |          |
|                | e-business strategy and Supply Chain Management, concepts, methods and tools             |                               |          |
|                | Innovation management : methods & tools applied to product, and system development       |                               |          |
|                | <b>Scientific and Technical Project courses</b>  |                               |          |
| <b>PRI12SC</b> | <b>Supply Chain Optimization Project .....</b>   |                               | <b>6</b> |
|                | <b>Foreign Languages courses</b>   |                               |          |
| <b>FFS02DD</b> | <b>French Summer School - INTENSIVE 4 week</b>   | <b>4</b>                      |          |
| <b>LVI11FL</b> | <b>French Language &amp; Culture [for native French speakers : Spanish course] .....</b> | <b>2</b>                      |          |
| <b>LVI12FL</b> | <b>French Language &amp; Culture [for native French speakers : Spanish course] .....</b> |                               | <b>2</b> |
|                | <b>Training for the corporate world courses</b>  |                               |          |
| <b>FEM11VS</b> | <b>Company visits and seminars 1 .....</b>   | <b>1</b>                      |          |
| <b>FEM12VS</b> | <b>Company visits and seminars 2 .....</b>   |                               | <b>1</b> |