

## Zero Defect Manufacturing for Circular Economy Programme

- Study plan -

### Polimi - Grenoble collaboration

#### General structure of the EIT-M Master Programme

| Type of modules                             | Total credits for EIT-M Master | Total credits 1 <sup>st</sup> year | Total credits 2 <sup>nd</sup> year |
|---|--------------------------------|------------------------------------|------------------------------------|
| Technical courses (TC)                      | 45                             | 40-50                              | 10-20                              |
| Specialization courses (SC)                 | 15                             |                                    |                                    |
| Innovation & entrepreneurship courses (I&E) | 30                             | 10-20                              | 10-20                              |
| Master thesis (MT)                          | 30                             | 0                                  | 30                                 |
| Tot   | 120                            | 60                                 | 60                                 |

#### Entry university Polimi – exit university Grenoble INP

#### 1<sup>st</sup> year - Polimi

| Type of modules | POLIMI courses   | ECTS | Semester | Total credits             |
|-----------------|--|------|----------|---------------------------|
| TC              | <a href="#">Advanced manufacturing processes</a>                     | 10   | 1        | 37<br>(25 sem 1, 12 sem2) |
|                 | <a href="#">Applied metallurgy</a>                                   | 6    | 1        |                           |
|                 | <a href="#">Control and actuating devices for mechanical systems</a> | 9    | 1        |                           |
|                 | <a href="#">Measurements</a>   | 5    | 2        |                           |
|                 | <a href="#">Machine design</a>                                       | 7    | 2        |                           |
| SC              | <a href="#">Quality data analysis</a>                                | 8    | 1        | 8 (8 sem1)                |
| I&E             | <a href="#">Design &amp; management of production systems</a>        | 10   | 2        | 15 (15 sem 2)             |
|                 | <a href="#">Managing technology disruption</a>                       | 5    | 2        |                           |

## 2<sup>nd</sup> year - Grenoble INP

| Type of modules            | Grenoble INP courses                                | ECTS | Semester | Total credits |
|----------------------------|---|------|----------|---------------|
| TC<br>(2 choices out of 3) | AI for production systems                           | 5    | 3        | 10            |
|                            | Smart analytics for big data                        | 5    | 3        |               |
|                            | Digital chain for industry 4.0, including VR and AR | 5    | 3        |               |
| SC<br>(1 choice out of 2)  | Sustainable manufacturing                           | 6    | 3        | 6             |
|                            | Advanced LCA for production systems                 | 6    | 3        |               |
| I&E<br>(all 3 mandatory)   | Centrally organized summer school                   | 5    | TBC      | 14            |
|                            | Operational excellence in R&D                       | 5    | 3        |               |
|                            | Innovation challenge                                | 4    | 3        |               |
| MT                         | Master thesis                                       | 30   | 4        | 30            |

## Recap

| Type of modules | ECTS in S1 | ECTS in S2 | ECTS in S3 | ECTS in S4 | Total credits |
|-----------------|------------|------------|------------|------------|---------------|
| TC              | 25         | 12         | 10         | 0          | <b>45</b>     |
| SC              | 8          | 5          | 6          | 0          | <b>15</b>     |
| I&E             | 0          | 15         | 14         | 0          | <b>30</b>     |
| MT              | 0          | 0          | 0          | 30         | <b>30</b>     |
| Tot             | <b>33</b>  | <b>27</b>  | <b>30</b>  | <b>30</b>  | <b>120</b>    |