

#### 4-3. Program overlook

|            | Master of Science 1   | Master of Science 2  |
|------------|---|--|
| Location   | TMU   | Lille  |
| Credits    | 26 mandatory class credits (18 for MS1, 2 for MS2, 6 for master thesis)<br>4 elective class credits   | Total 120 credits<br>60 mandatory class credits (30 for MS2 3 <sup>rd</sup> semester, 30 for MS2 4 <sup>th</sup> semester)   |
| Curriculum | <p>Mandatory classes (a total of 10, representing 20 credits, except thesis)</p> <ol style="list-style-type: none"> <li>1. Research ethics</li> <li>2. Moon-Shan Academia-Industry Forum</li> <li>3. Seminar</li> <li>4. Thesis writing</li> <li>5. Advanced topics in materials &amp; sensing analysis</li> <li>6. Clinical translational research</li> <li>7. Advanced topics in advanced biomedical engineering</li> <li>8. Advanced topics in optomechatronics integration &amp; instrument sensing</li> <li>9. Medical photonics</li> <li>10. BioMEMS</li> </ol> <p>Elective classes:</p> <ol style="list-style-type: none"> <li>1. Processing &amp; characterization of biomedical materials</li> <li>2. Cancer biology from tissue engineering in perspective</li> <li>3. Structural characterization of nanomaterials</li> <li>4. Advanced topics in surface engineering of biomaterials</li> <li>5. Applications of nanotechnology in biomedicine</li> <li>6. Concepts of medical instrument design &amp; development</li> </ol> | <ol style="list-style-type: none"> <li>1. Industrial purchasing</li> <li>2. Sales force management</li> <li>3. Business ethics</li> <li>4. International strategies in the healthcare sector</li> <li>5. Legal and regulatory considerations in the medical and biomedical industry</li> <li>6. International marketing</li> <li>7. E-health and artificial intelligence</li> <li>8. Leadership</li> <li>9. Lean engineering</li> <li>10. Regulatory affairs</li> <li>11. Master's thesis</li> <li>12. Internship</li> </ol> |