

MOBILITY SCHEME UNIBO> UDE AND UDE >UNIBO (Revised Version)

Students enrolled in Bologna

First Semester in Bologna	<ul style="list-style-type: none"> <li>• 33925 IMPIANTI INDUSTRIALI M ING-IND/17 TAF B 6 CFU (Industrial Systems M – 6 ECTS)</li> <li>• 35245 CONTROLLI AUTOMATICI M ING-INF/04 TAF C 6 CFU (35245 Automatic Control Systems M – 6 ECTS)</li> <li>• 26337 Inglese B2 TAF F 6 CFU (26337 English Language Test B2 – 6 ECTS)</li> <li>• 87250 INGEGNERIZZAZIONE DEL PRODOTTO M ING-IND/15 TAF B 6 CFU (87250 Product Engineering &amp; Development M – 6 ECTS)</li> </ul> <p><b>Total ECTS: 24</b></p>	<ul style="list-style-type: none"> <li>• Factory Planning (from catalogue MechEng) <u>AND</u> Systems Engineering and Optimization (from catalogue SysDyn) (9 ECTS)</li> <li>• Control Theory / Control Theory Lab – 6 ECTS</li> <li>• English - Non-technicals <u>M ISE PO15</u> – 8 ECTS</li> <li>• Computer Aided Engineering (CAE) – 4 ECTS</li> </ul> <p><b>Total ECTS: 27</b></p>	ECTS transferred in “ Università partner”
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Second Semester in Bologna	<ul style="list-style-type: none"> <li>• 33923 COSTRUZIONE DI MACCHINE M ING-IND/14 TAF B 6 CFU (33923 Machine Construction M – 6 ECTS)</li>   <li>• 33927 MACCHINE M ING-IND/08 TAF B 6 CFU (33927 Machines M – 6 ECTS)</li>   <li>• 33929 TECNOLOGIE SPECIALI M ING-IND/16 TAF B 6 CFU (33929 Special Technologies M – 6 ECTS)</li>   <li>• 33928 MECCANICA DELLE MACCHINE M ING-IND/13 TAF B 6 CFU (33928 Machine Mechanics M – 6 ECTS)</li>   <li>• 91300 ELECTRIC DRIVES M ING-IND/32 TAF C (91300 Electric Drives M – 6 ECTS)</li> </ul> <p><b>Total ECTS: 30</b></p>	<ul style="list-style-type: none"> <li>• Application Programming with CAX Systems (From Catalogue MechEng) – 4 ECTS <u>AND</u> Virtual Product Representation (From Catalogue MechEng) – 4 ECTS</li>   <li>• Steam Turbines (From Catalogue MechEng_PO15) – 4 ECTS <u>AND</u> Turbo Compressors (From Catalogue MechEng) – 4 ECTS</li>   <li>• Manufacturing Technology – 4 ECTS <u>AND</u></li> <li>• Additive Manufacturing Processes 2 (From Catalogue MechEng_PO15) – 4 ECTS</li>   <li>• Kinematics of Robots and Mechanisms (From Catalogue SysDyn) – 4 ECTS</li>   <li>• Vehicle Technologies from catalogue MechEng – 4 ECTS (This one is new at UDE)</li> </ul> <p><b>Total ECTS: 32</b></p>	ECTS transferred in “ <i>Università partner</i> ”
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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Third Semester in “ Università partner”</p>	<ul style="list-style-type: none"> <li>• Robotic Applications (From Catalogue MechatrAppl) - 4 ECTS</li> <li>• Qualitative Methods in Automation 1: Programming and Process Control Systems <b>OR</b> Qualitative Methods in Automation 2: Automata and Nets (MANCANO CREDITI?) – conteggio 4?</li> <li>• Vehicle Systems(from Catalogue MechatrAppl) – 4 ECTS <u>AND</u></li> <li>• Fluid Machines (from catalogue MechEng) 4ECTS</li> <li>• Industrial Engineering – 5 ECTS (This one is new at UDE)</li> <li>• Technical Fundamentals of Future Vehicle Systems (NEW) – 4 ETCS</li> <li>• Elective from catalogue MathMeth mandatory to choose one subject from catalogue in order to fulfill UDE study requirements (Suggestion: Applied Computational Fluid Dynamics) – 4 ECTS</li> <li>• Combustion Science -- 4 ECTS</li> </ul> <p><b>Total ECTS: 33</b></p>	<ul style="list-style-type: none"> <li>• 93803 MECCANICA DEI ROBOT E MECCANICA DELLE VIBRAZIONI M C.I-12 CFU corso integrato, composto dai seguenti moduli: <ul style="list-style-type: none"> <li>○ MECCANICA DELLE VIBRAZIONI M ING-IND/13 TAF B 6 CFU</li> <li>○ MECCANICA DELLE VIBRAZIONI M C.I. MECCANICA DEI ROBOT M ING-IND/13 6 CFU</li> </ul> (33971 Vibration Mechanics M – 6 ECTS + 34303 Robotics M – 6 ECTS) </li> <li>• 33976 OLEODINAMICA E PNEUMATICA M ING-IND/09 TAF B 6 CFU (33976 Oleohydraulics and Pneumatics M – 6 ECTS)</li> <li>• 34285 LOGISTICA INDUSTRIALE M ING-IND/17 TAF B 6 CFU (34285 Industrial Logistics – 6 ECTS)</li> <li>• 33959 COSTRUZIONE DI MACCHINE AUTOMATICHE E ROBOT M ING-IND/14 TAF D 6 CFU (33959 Construction of Automated Machines and Robots M – 6 ECTS) Precisazione: è il secondo caratterizzante, quindi pur essendo nel curriculum e nel regolamento come TAF B, in questo caso è inteso come TAF D a scelta libera dello studente)</li> <li>• 85781 ADVANCED COMBUSTION SYSTEMS M ING-IND/08 TAF D 6 CFU (6 ECTS)</li> </ul> <p><b>TOTAL ECTS: 36</b></p>	<p>ECTS transferred in Bologna</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Fourth Semester “ Universitàpartner”</p>	<ul style="list-style-type: none"> <li>• Master Thesis 30 ECTS</li> </ul> <p><b>Total ECTS: 30</b></p>	<ul style="list-style-type: none"> <li>• 87251 LABORATORIO DI ROBOTICA E MECCATRONICA M TAF F 6 CFU (87251 Laboratory of Robotics and Mechatronics m – 6 ECTS)</li> <li>• 17268 PROVA FINALE TAF E 18 CFU (Final Examination – TAF E – 18 ECTS)</li> <li>• 75055 TIROCINIO M-A1 TAF F 6 CFU (75055 Work Placement M-A1 - TAF F – 6 ECTS)</li> </ul> <p><b>TOTAL ECTS: 30</b></p>	<p>ECTS transferred in Bologna</p>
<p>Totale</p>	<p><b>ECTS: 27+32+33+30 = 122 ECTS</b></p>	<p><b>ECTS: 24+30+36+30 = 120 ECTS</b></p>	<p>Totale</p>

Students enrolled in "University of Duisburg Essen"

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">First Semester in " University of Duisburg"</p>	<ul style="list-style-type: none"> <li>• Combustion Science – 4 ECTS</li> <li>• Control Theory / Control Theory Lab – 6 ECTS</li> <li>• Manufacturing Technology – 4 ECTS</li> <li>• Computer Aided Engineering (CAE) – 4 ECTS</li>   <li>• Additive Manufacturing 2– 4 ECTS</li> <li>• Industrial Engineering – 4 ECTS</li> <li>• English Language (Non technical subjects) – 4 ECTS</li> </ul> <p><b>Total ECTS: 30</b></p>	<ul style="list-style-type: none"> <li>• 33931 CHIMICA DEI PROCESSI DI COMBUSTIONE M CHIM/07 TAF C, 6 CFU (33931 Chemistry of Combustion Processes M – 6 ECTS)</li> <li>• 35245 CONTROLLI AUTOMATICI M ING-INF/04 TAF C 6 CFU (35245 Automatic Control Systems M – 6 ECTS)</li> <li>• 33929 TECNOLOGIE SPECIALI M ING-IND/16 TAF B 6 CFU (33929 Special Technologies M – 6 ECTS)</li> <li>• 87250 INGEGNERIZZAZIONE DEL PRODOTTO M ING-IND/15 TAF B 6 CFU (87250 Product Development M – 6 ECTS)</li>   <li>• 33978 PROCESSI E METODI DI FABBRICAZIONE PER LO SVILUPPO DEL PRODOTTO M ING-IND/16 TAF D 6 CFU (<b>3 ECTS utili nel primo semestre</b>)</li> <li>• 33925 IMPIANTI INDUSTRIALI M ING-IND/17 TAF B MODULO 1 3 CFU (33925 Industrial Systems M –Mod. 1 - 3 ECTS) –</li> <li>• 26337 Inglese B2 TAF F 6CFU (English Language Test B2 – <b>3 ECTS utili nel 1 semestre</b>)</li> </ul> <p><b>TOTAL ECTS: 33</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">ECTS transferred in Bologna</p>
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- English Language (Non technical subjects) – 4 ECTS
- Application Programming With CAX Systems– 4 ECTS
- Virtual Product Representation – 4 ECTS
- Additive Manufacturing 3 – 4 ECTS
- Kinematics of Robots and Mechanisms – 4 ECTS
- Manipulator Technology -4 ECTS
- Turbo Compressors (From Catalogue MechEng) – 4 ECTS
- System Engineering and Optimization (from Catalogue SysDyn – See DD Module System Engineering) – 4 ECTS

**Total ECTS: 32**

- 26337 Inglese B2 TAF F 6CFU  
(English Language Test B2 – **3 ECTS utili nel secondo semestre**)
- 33923 COSTRUZIONE DI MACCHINE M ING-IND/14 TAF B 6 CFU  
(Machine Construction M – 6 ECTS)
- 33978 PROCESSI E METODI DI FABBRICAZIONE PER LO SVILUPPO DEL  
PRODOTTO M ING-IND/16 TAF D 6 CFU (**3 ECTS utili nel secondo  
semestre** )
- 33928 MECCANICA DELLE MACCHINE M ING-IND/13 TAF B MODULO 1  
3 CFU  
(33928 Machine Mechanics M – Mod. 1 - 3 ECTS)
- 33928 MECCANICA DELLE MACCHINE M ING-IND/13 TAF B MODULO 2  
3 CFU  
(33928 Machine Mechanics M – Mod. 2 - 3 ECTS)
- 33927 MACCHINE M ING-IND/08 TAF B 6 CFU  
(33927 Machines M – **6 ECTS**)
- 33925 IMPIANTI INDUSTRIALI M ING-IND/17 TAF B MODULO 2 3 CFU  
(33925 Industrial Systems M –Mod. 2 - 3 ECTS)

**Total ECTS: 27**

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Third Semester in Bologna</p>	<ul style="list-style-type: none"> <li>• 86466 MOTORCYCLE VEHICLE DYNAMICS ING-IND/13 TAF B, 6 CFU (6 ECTS)</li> <li>• 85780 MODELING AND CONTROL OF INTERNAL COMBUSTION ENGINES AND HYBRID PROPULSION SYSTEMS M ING-IND/08 TAF B , 6 CFU (6 ECTS)</li> </ul> <p>85818 PROGETTAZIONE E DINAMICA DEL MOTOVEICOLO C.I. COMPOSTO DAI MODULI:</p> <ul style="list-style-type: none"> <li>• CHASSIS AND BODY DESIGN AND MANUFACTURING ING-IND/14 TAF B 6 CFU ( 6 ECTS) E</li> <li>• VEHICLE VIRTUAL DESIGN ING-IND/15 TAF B 6 CFU (6 ECTS)</li> </ul> <ul style="list-style-type: none"> <li>• 33933 TERMOFLUIDODINAMICA COMPUTAZIONALE M ING-IND/10 TAF B 6 CFU (Computational Thermo-Fluid Dynamics M 6 ECTS)</li> </ul> <p><b>Total ECTS: 30</b></p>	<ul style="list-style-type: none"> <li>• Cognitive Technical Systems (From Catalogue MechaApp) – 4 ECTS AND</li> <li>• Electives MathMed: Vibration Analysis with MATLAB -5 ECTS</li> <li>• Internal Combustion Engines (From Catalogue MechEng) – 4 ETCS AND</li> <li>• Steam Turbines (From Catalogue MechEng) – 4 ETCS</li> <li>• Vehicle Dynamics (From Catalogue MechaApp)– 4 ECTS</li> <li>• Technical fundamentals of Future Vehicle Systems (From Catalogue MechaApp) – 4 ECTS</li> <li>• Applied Computational Fluid Dynamics (From Catalogue MathMethods) - 5 ECTS</li> </ul> <p><b>Total ECTS: 30</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">ECTS transferred in “ <i>Università partner</i>”</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Fourth Semester Bologna</p>	<ul style="list-style-type: none"> <li>• 75055 TIROCINIO M-A1 TAF F 6 CFU (75055 Work Placement M-A1 - TAF F – 6 ECTS)</li> <li>• 85782 COMPUTER AIDED DESIGN LAB M – TAF F- 6 ECTS</li> <li>• 17268 PROVA FINALE TAF E 18 CFU (Final Examination – TAF E – 18 ECTS)</li> </ul> <p><b>Total ECTS: 30</b></p>	<ul style="list-style-type: none"> <li>• Master Thesis 30 ECTS</li> </ul> <p><b>Total ECTS: 30</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">ECTS transferred in <i>partner</i></p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Totale</p>	<p style="text-align: center;">ECTS: 33+27+30+30 = 120 ECTS</p>	<p style="text-align: center;">ECTS: 30+32+30+30= 122 ECTS</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Totale</p>