### UNIPI-UPD programme

<table>
<thead>
<tr>
<th>Year</th>
<th>First Semester</th>
<th>CFU</th>
<th>Second Semester</th>
<th>CFU</th>
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</thead>
<tbody>
<tr>
<td><strong>First Year at UNIPI - students with CS Bachelor</strong></td>
<td></td>
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<tr>
<td>Business Economics</td>
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<td>Business Economics</td>
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<tr>
<td>(GR 2 Elective courses (in Italian))</td>
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<td>(GR 2 Elective courses (in Italian))</td>
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<tr>
<td>Computer Science</td>
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<tr>
<td>Business Process Modeling</td>
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<td>(GR 1 Elective courses)</td>
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<tr>
<td>Decision and Operational Research</td>
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<td>Computer Science</td>
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<tr>
<td>Logistics</td>
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<td>(GR 1 Elective courses)</td>
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<td>Computer Science</td>
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<tr>
<td>Data Mining (Module I) Foundations</td>
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<td>Data Mining (Module II) Advanced Topics and Applications</td>
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<tr>
<td>Decision Support Data Bases</td>
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<td><strong>First Semester</strong></td>
<td><strong>CFU</strong></td>
<td><strong>Second Semester</strong></td>
<td><strong>CFU</strong></td>
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<td><strong>First Year at UNIPI - Non CS Bachelor</strong></td>
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<td>From G2 or G3 Programming for Data Science</td>
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<td>Effective Subjects</td>
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<td>Algoritmica e Laboratorio</td>
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<td>Computer Science</td>
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<td>Effective Subjects</td>
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<td>Business Process Modeling OR Decision Support Databases</td>
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<td>Basi di Dati (or exams from GR1 if Basi di Dati has already been passed) (in Italian)</td>
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<td><strong>Second Year at UPD</strong></td>
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<td>Decision, Business economics, Computer science</td>
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<tr>
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<td>Decision in business, use cases (3 ECTS), Low and ethics (3 ECTS)</td>
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<td>Computer Science</td>
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<tr>
<td>Optimisation techniques for Data Science (3 ECTS), Data Mining/Machine learning (4 ECTS), Systems, Languages and Paradigms for Big Data (3 ECTS), Security of Information Systems (3 ECTS)</td>
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<td>Business Intelligence project (3 ECTS), Data Visualization (3 ECTS), Management of computer science project (3 ECTS)</td>
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<td>English</td>
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