

SCUOLA DI ARCHITETTURA URBANISTICA INGEGNERIA DELLE COSTRUZIONI SCUOLA DI INGEGNERIA INDUSTRIALE E DELL'INFORMAZIONE

**Internal Double Degree** 

Management of Built Environment (LM-24) and Urban Planning and policy Design (LM-48)

### 1. Aim of the programme

The Internal Double Master's Degree in **Management of Built Environment** - **Urban Planning and policy Design** aims at facing the new challenges emerging in the construction industry at national and international level, because of various technical social, cultural, and economic factors when integrating or modifying the built asset in existing urban area according to urban planning. This requires new professional profiles, capable of integrating technical and managerial skills.

Therefore, the aim of the Double Master's Degree in Management of Built Environment - Urban Planning and policy Design is to train professionals who can strengthen the skills of a urban planner for what concerns this particular sector, while also providing experts of the built environment in-depth urban planning and policy design skills. Thus, students can become more aware of the difficulties of building design, infrastructure and urban design interaction between management issues and techniques at all stages of the construction cycle. In this sense, particular attention will be paid to the problems of energy and urban planning, economic assessment of urban transformation, and the management of innovation and real estate functions.

### 2. Study plan

#### 2.1 General structure of the double degree programme

The Double Degree programme is based on two Master's Degree Programs of Politecnico di Milano: the Master Degree in Management of Built Environment and the Master Degree in **Urban Planning and policy Design**.

Students can enter the double degree from either program, depending on their propensity and background; in other words, students can be admitted from either the Management of Built Environment or the **Urban Planning and policy Design** intake. This allows students to first deepen one of the two fields, then focus on the other one, to lastly integrate the two.



# 2.2 Detailed description of the study plan for students enrolling from the Management of Built Environment intake (PSPA: MT3 TECHNICAL CURRICULUM)

Students with the First Degree in Architecture, Planning, Civil Engineering, Built and Management Engineering access the program with no debt.

| 096311 | Technical assessment of the built environment                   | MBE  | CM  | Α | 9  | 9  | 1 | 1 | ICAR/12    |
|--------|---|------|-----|---|----|----|---|---|------------|
|        | One among   |      |     |   |    |    |   |   |            |
| 054436 | Building types and real estate functions                        | MBE  | CM  | Α | 9  |    | 1 | 1 | ICAR/12    |
| 096307 | Business economics  | MBE  | CM  | Α | 9  | 9  | 1 | 1 | ING-IND/35 |
|        | One among   |      |     |   |    |    |   |   |            |
| 053105 | Building and construction technologies                          | MBE  | CM  | Α | 9  | •  | 1 | 1 | ICAR/11    |
| 097610 | Production management   | MBE  | CM  | Α | 9  | 9  | 1 | 1 | ING-IND/17 |
| 053119 | Durability and maintenance                                      | MBE  | CM  | Α | 12 | 12 | 1 | 2 | ICAR/11    |
| 096312 | Methods and tools for analysis of urban and territorial systems | MBE  | CM  | Α | 6  | 6  | 1 | 2 | ICAR/21    |
| 053109 | Regional economics + land rent theory                           | MBE  | CM  | Α | 12 | 12 | 1 | 2 | SECS-P/06  |
| 055729 | Building maintenance proceedings and methods                    | MBE  | CM  | Α | 6  | 6  | 2 | 1 | ICAR/11    |
| 054754 | Facility management lab   | MBE  | CM  | Α | 6  | 6  | 2 | 1 | ICAR/12    |
| 051336 | Construction management   | MBE  |     |   |    |    |   |   |            |
| 051337 | Construction management A: principles                           | MBE  | CL  | Α | 6  | 12 | 2 | 1 | ICAR/11    |
| 051338 | Construction management B: applications                         | MBE  | CL  | Α | 6  | 12 | 2 | 1 | ICAR/11    |
| 051335 | Administrative and public procurement law                       | MBE  | CM  | Α | 6  | 6  | 2 | 2 | IUS/10     |
| 053117 | Economic assessment of urban trasformations                     | MBE  | CM  | Α | 9  | 9  | 2 | 2 | SECS-P/06  |
| 054437 | Social housing estate and management                            | MBE  | CM  | Α | 9  | 9  | 2 | 2 | ICAR/12    |
| 096322 | Internship  | MBE  | Т   | Α | 3  | 3  | 2 |   |            |
| 055734 | Synthesis class - Technical Curriculum                          | MBE  | PF  | Α | 12 | 12 | 2 |   |            |
| 059379 | Planning theory and practice                                    | UPPD | CM  | Α | 6  | 6  | 1 | 1 | ICAR/20    |
| 054530 | Conflicts management and resolution                             | UPPD | CM  | Α | 6  | 6  | 2 | 1 | ICAR/20    |
|        | One among   |      |     |   |    |    |   |   |            |
| 054497 | Urban planning and design studio                                | UPPD |     |   |    |    |   |   |            |
| 054502 | Urban design  | UPPD | IL  | Α | 6  |    | 1 | 1 | ICAR/21    |
| 054503 | Urban planning  | UPPD | IL  | Α | 6  |    | 1 | 1 | ICAR/21    |
| 054504 | Spatial planning and infrastructure design studio               | UPPD |     |   |    | 12 |   |   |            |
| 054505 | Spatial planning and design                                     | UPPD | IL  | Α | 6  |    | 1 | 1 | ICAR/21    |
| 054506 | Infrastructure design   | UPPD | IL  | Α | 6  |    | 1 | 1 | ICAR/21    |
| 054512 | Contemporary city: descriptions and projects                    | UPPD |     |   |    |    |   |   |            |
| 054513 | Infrastructure and urban planning                               | UPPD | ICI | Α | 4  | 10 | 1 | 2 | ICAR/04    |
| 054514 | Urban planning and design                                       | UPPD | ICI | Α | 6  | 10 | 1 | 2 | ICAR/21    |
| 057932 | Sociology of the City   | UPPD |     |   |    |    |   |   |            |
| 096856 | Social change   | UPPD | ICI | Α | 4  | 8  | 1 | 1 | SPS/09     |



| 096857 | Social policies                           | UPPD | ICI | Α | 4 |    | 1 | 1   | SPS/09    |
|--------|---|------|-----|---|---|----|---|-----|-----------|
|        | Tematic workshop (one among):             |      |     |   |   |    |   |     |           |
| 057171 | Housing and neighbourhoods                | UPPD |     |   |   |    |   |     |           |
| 057172 | Social policies                           | UPPD | ICI | Α | 6 |    | 2 | 1   | SPS/09    |
| 057173 | Urban policies                            | UPPD | ICI | Α | 6 |    | 2 | 1   | ICAR/20   |
| 055695 | Energy, Climate and Urban Planning        | UPPD |     |   |   | 12 |   |     |           |
| 096355 | Sustainable urban design                  | UPPD | IL  | Α | 8 |    | 2 | 1   | ICAR/20   |
| 055696 | Urban survey and representation           | UPPD | IL  | Α | 4 |    | 2 | 1   | ICAR/17   |
| 081911 | Internship                                | UPPD | Т   | Α | 4 | 1  | 2 | 1/2 |           |
| 099732 | IC Economics of public issues             | UPPD |     |   |   |    |   |     |           |
| 099733 | Poverty, inequality and the welfare state | UPPD | ICI | Α | 4 | 8  | 2 | 2   | SECS-P/03 |
| 099734 | Economic analysis of public policies      | UPPD | ICI | Α | 4 | ٥  | 2 | 2   | SECS-P/03 |



## 2.3 Detailed description of the study plan for students enrolling from Urban Planning and Policy Design (PSPA)

| 057932 | Sociology of the City                             | UPPD |     |   |        |    |   |     |           |
|--------|---|------|-----|---|--------|----|---|-----|-----------|
| 096856 | Social change                                     | UPPD | ICI | Α | 4      | 8  | 1 | 1   | SPS/09    |
| 096857 | Social policies                                   | UPPD | ICI | Α | 4      |    | 1 | 1   | SPS/09    |
| 057929 | IC Urbanism                                       | UPPD |     |   |        |    |   |     |           |
| 057930 | Introduction to visual thinking                   | UPPD | ICI | Α | 4      | 10 | 1 | 1   | ICAR/14   |
| 054496 | Urbanism: issues and tools                        | UPPD | ICI | Α | 6      | 10 | 1 | 1   | ICAR/21   |
| 059379 | Planning theory and practice                      | UPPD | СМ  | Α | 6      | 6  | 1 | 1   | ICAR/20   |
|        | Planning studio (one among):                      |      |     |   |        |    |   |     |           |
| 054497 | Urban planning and design studio                  | UPPD |     |   |        |    |   |     |           |
| 054502 | Urban design                                      | UPPD | IL  | Α | 6      |    | 1 | 1   | ICAR/21   |
| 054503 | Urban planning                                    | UPPD | IL  | Α | 6      |    | 1 | 1   | ICAR/21   |
| 054504 | Spatial planning and infrastructure design studio | UPPD |     |   |        | 12 |   |     |           |
| 054505 | Spatial planning and design                       | UPPD | IL  | Α | 6      |    | 1 | 1   | ICAR/21   |
| 054506 | Infrastructure design                             | UPPD | IL  | Α | 6      |    | 1 | 1   | ICAR/21   |
| 054511 | Policy analysis                                   | UPPD | СМ  | Α | 4      | 4  | 1 | 2   | SPS/04    |
| 054512 | Contemporary city: descriptions and projects      | UPPD |     |   |        |    |   |     |           |
| 054513 | Infrastructure and urban planning                 | UPPD | ICI | Α | 4      | 10 | 1 | 2   | ICAR/04   |
| 054514 | Urban planning and design                         | UPPD | ICI | Α | 6      | 10 | 1 | 2   | ICAR/21   |
| 054515 | Strategic planning and urban policies             | UPPD | СМ  | Α | 6      | 6  | 1 | 2   | ICAR/20   |
|        | Planning studio (one among):                      |      |     |   |        |    |   |     |           |
| 054516 | Urban policies and design studio                  | UPPD |     |   |        |    |   |     |           |
| 054518 | Urban policies                                    | UPPD | IL  | Α | 6      |    | 1 | 2   | ICAR/20   |
| 054519 | Urban Design                                      | UPPD | IL  | Α | 6      |    | 1 | 2   | ICAR/21   |
| 054520 | Master plans studio                               | UPPD |     |   |        | 12 |   |     |           |
| 054521 | Urban design                                      | UPPD | IL  | Α | 6      |    | 1 | 2   | ICAR/21   |
| 054522 | Urban design process management                   | UPPD | IL  | Α | 6      |    | 1 | 2   | ICAR/20   |
| 099717 | Regional economics                                | UPPD | СМ  | Α | 4      | 4  | 2 | 1   | SECS-P/06 |
|        | Tematic workshop (one among):                     |      |     |   |        |    |   |     |           |
| 057171 | Housing and neighbourhoods                        | UPPD |     |   |        |    |   |     |           |
| 057172 | Social policies                                   | UPPD | ICI | Α | 6      |    | 2 | 1   | SPS/09    |
| 057173 | Urban policies                                    | UPPD | ICI | Α | 6      |    | 2 | 1   | ICAR/20   |
| 055695 | Energy, Climate and Urban Planning                | UPPD |     |   |        | 12 |   |     |           |
| 096355 | Sustainable urban design                          | UPPD | IL  | Α | 8      |    | 2 | 1   | ICAR/20   |
| 055696 | Urban survey and representation                   | UPPD | IL  | Α | 4      |    | 2 | 1   | ICAR/17   |
| 081911 | Internship  | UPPD | Т   | Α | 4      | 4  | 2 | 1/2 |           |
| 098631 | Final Thesis                                      | UPPD | F   | Α | 1<br>2 | 12 | 2 | 1/2 |           |



| 054530 | Conflicts management and resolution           | UPPD | СМ  | Α | 6      | 6  | 2 | 1 | ICAR/20        |
|--------|---|------|-----|---|--------|----|---|---|----------------|
| 054529 | Transport planning and economics              | UPPD | СМ  | Α | 4      | 4  | 2 | 1 | SECS-P/06      |
| 054685 | Land use ethics and the law                   | UPPD | СМ  | Α | 6      |    | 2 | 2 | ICAR/20        |
| 099732 | IC Economics of public issues                 | UPPD |     |   |        |    |   |   |                |
| 099733 | Poverty, inequality and the welfare state     | UPPD | ICI | Α | 4      |    | 2 | 2 | SECS-P/03      |
| 099734 | Economic analysis of public policies          | UPPD | ICI | Α | 4      | 10 | 2 | 2 | SECS-P/03      |
| 057174 | EU policies for Sustainability and the City   | UPPD | СМ  | Α | 6      |    | 2 | 2 | ICAR/20        |
| 057934 | Global Urban Challenges Concepts and Contexts | UPPD | СМ  | Α | 4      |    | 2 | 2 | M-<br>GGR/02   |
| 096311 | Technical assessment of the built environment | MBE  | СМ  | Α | 9      | 9  | 1 | 1 | ICAR/12        |
|        | One among                                     |      |     |   |        |    |   |   |                |
| 054436 | Building types and real estate functions (c)  | MBE  | СМ  | Α | 9      |    | 1 | 1 | ICAR/12        |
| 096307 | Business economics (d)                        | MBE  | СМ  | Α | 9      | 9  | 1 | 1 | ING-<br>IND/35 |
|        | One among                                     |      |     |   |        |    |   |   |                |
| 053105 | Building and construction technologies (a)    | MBE  | СМ  | Α | 9      |    | 1 | 1 | ICAR/11        |
| 097610 | Production management (b)                     | MBE  | СМ  | Α | 9      | 9  | 1 | 1 | ING-<br>IND/17 |
| 053119 | Durability and maintenance                    | MBE  | СМ  | Α | 1<br>2 | 12 | 1 | 2 | ICAR/11        |
| 051336 | Construction management                       | MBE  |     |   |        |    |   |   |                |
| 051337 | Construction management A: principles         | MBE  | CL  | Α | 6      | 12 | 2 | 1 | ICAR/11        |
| 051338 | Construction management B: applications       | MBE  | CL  | Α | 6      | 12 | 2 | 1 | ICAR/11        |
| 053117 | Economic assessment of urban trasformations   | MBE  | СМ  | Α | 9      | 9  | 2 | 2 | SECS-P/06      |
|        |   |      |     |   |        |    |   |   |                |

<sup>(</sup>a) Mandatory education for students who have completed the Bachelor in Economic-Management and Civil-Environmental.

#### 3. Final thesis

The final thesis has to be drafted by each candidate. Because of the peculiar nature of the Double Degree programme, double authors thesis is not allowed.

The final thesis can be assigned a final mark of -1/5 points (thesis without external reviewer/controrelatore) or -1/7 points (thesis with external reviewer/controrelatore).

<sup>(</sup>b) Mandatory education for students who have completed the Bachelor in Building Engineering or Architecture.

<sup>(</sup>c) Mandatory education for students who have completed the Bachelor in Economic-Management and Civil-Environmental.

<sup>(</sup>d) Mandatory education for students who have completed the Bachelor in Building Engineering or Architecture.