

Planning and organization of educational and research activities for the growth of doctoral students

XXXIX Cycle

University of Palermo

(AVA Reference 3 D.PHD.2)

The PhD Course in Systems Dynamics offers a rich calendar of training activities, suited – both in terms of quantity and quality – to the aims of the PhD, also through the participation of high-profile Italian and foreign scholars and experts from the academic world, research organizations, enterprises, cultural and social institutions.

The organization of the course activities aims at making the doctoral students competent and autonomous in conceiving, designing, implementing, and disseminating research programs, and includes the necessary guidance and support from the tutors of the Teachers' Board, and/or – where appropriate – from competent external tutors.

The course activities – which essentially consist of scheduled teaching activities, seminars, and in-depth language courses – are balanced between highly specific topics related to each research project and more general aspects aimed at filling any knowledge gaps with multidisciplinary, transdisciplinary, and interdisciplinary elements.

The training program also includes in-depth linguistic activities and lectures aimed at the dissemination/communication of the research activity.

The planned teaching activities – intended for students in the first two years of the course – consist of at least 20 hours of frontal teaching for each curriculum. These teaching activities are different from those offered to students on bachelor's and master's degree courses, in terms of content and innovative teaching and research methodologies.

More specifically, the following teaching activities are planned for the 'Models for performance improvement in the public sector' curriculum:

- *Dynamic Performance Management (140 hours - first/second year):*
The course aims at offering the basic principles of the Dynamic Performance Management method. The course is an integral part of the PhD program with reference to the curriculum 'Models for Performance Improvement in the Public Sector'. In addition, the course is conducted entirely in English.
- *Dynamic Performance Management for Public Sector Organizations (100 hours - first/second year):*
The course aims at offering the Dynamic Performance Management method and applying it to public sector organizations. The course is an integral part of the PhD program with reference to the curriculum 'Models for Performance Improvement in the Public Sector'. In addition, the course is conducted entirely in English.
- *Dynamic Performance Governance (150 hours - first/second year):*
The course aims at offering the principles and techniques of implementing Dynamic Performance Governance. The course is an integral part of the PhD program with reference to the curriculum 'Models for Performance Improvement in the Public Sector'. In addition, the course is conducted entirely in English.
- *Fundamentals of Dynamic Social Systems (100 hours - first year):*
The course aims at offering the basic principles of System Dynamics methodology. The course is an integral part of the PhD program with reference to the curriculum

'Models for Performance Improvement in the Public Sector'. In addition, the course is conducted entirely in English.

- *Model-based Analysis and Policy Design (100 hours - first year):
The course introduces quantitative modelling aimed at simulating scenarios for public policy analysis. The course is an integral part of the PhD program with reference to the curriculum 'Models for Performance Improvement in the Public Sector'. In addition, the course is conducted entirely in English. (first year)*
- *System Dynamics Modelling Process (100 hours - first year):
The course aims at offering advanced techniques of qualitative-quantitative modelling through the support of System Dynamics methodology. The course is an integral part of the PhD program with reference to the curriculum 'Models for Performance Improvement in the Public Sector'. In addition, the course is conducted entirely in English.*

The following teaching activities are planned for the 'Dynamics of Legal Systems' curriculum:

- *General Systems Theory (20 hours - first year):
The course provides knowledge on the basics of the systems dynamics method and in particular on the ability of analysis-diagnosis that lends itself to support the processes of communication, learning, alignment and improvement of mental models and the adoption of normative systems, rules, and decision-making tools – such as to lead to the formulation of 'sustainable' policies, in time and space. In addition, the course is conducted entirely in English.*
- *Legal-Social Systemology (20 hours - first year):
The course provides the basics of systemology and its applications to the phenomena of production and management of social realities and the regulatory aspects functional to them. In addition, the course is entirely conducted in English.*
- *Methodology of legal-social comparison (20 hours - first year/second year):*
- *The course aims at giving students a full mastery of the method of comparison applied to legal and social phenomena, together with the method of systems dynamics, of the circulation of models also through the study of their hybridization. In addition, the course is entirely conducted in English.*

The following teaching activities are planned for the 'Dynamics of Historical, Economic and Social Systems' curriculum:

- *Contemporary economic issues in historical perspective (30 hours - first year):
The course addresses issues relevant to the understanding of contemporary economic scenarios, using a historical-economic perspective. The main topics concern: 1. the functioning of national and international institutions, with particular attention to central banks; 2. the main changes taking place in the definition of strategies and instruments of economic and monetary policy; 3. the analysis of the causes of the growing inequalities between and within countries, and the debate on*

economic policy interventions to face this emergency. The aim of the course is to provide doctoral students of the socio-economic-historical curriculum with the appropriate tools to develop innovative research projects on the analysis of the systemic determinants that condition the performance of the international economy.

- *The legacy of Keynes and Schumpeter; the history of welfare states and the varieties of capitalism (12 hours - first year):*
The course consists of a series of seminars devoted to some major issues in the economic history of the 20th century to strengthen the understanding of contemporary economic scenarios. The main topics concern: 1. Public intervention under conditions of uncertainty: the relevance of Keynes; 2. Endogenous growth and innovations: the relevance of Schumpeter; 3. The variety of capitalism in historical perspective: models of public intervention and economic growth; 4. Welfare and growth: lessons from the history of the 20th century. The aim of the series of seminars is to provide doctoral students of the socio-economic-historical curriculum with the appropriate tools to develop innovative research projects on the analysis of the systemic determinants that condition the performance of the international economy.

The doctoral program also includes, based on the annual schedule:

- *Seminars*
Meetings with Italian and international scholars for an in-depth study of doctoral topics, with reference to the theory of systems dynamics, the methodology and systemology of political-legal-social models, as well as the issues of the comparison and circulation of these models. The seminars favor an interdisciplinary approach to systems dynamics through the participation of scholars from different cultural and disciplinary backgrounds.
- *Advanced language courses*
Advanced language courses for students requiring English language support, with reference to contextual vocabulary and technical terminology. In particular, the courses, which make use of the facilities available at the university, aim to provide said students with the necessary tools to carry out attendance and research activities.

The calendar of teaching and seminar activities is published on the PhD website at the beginning of the academic year and is constantly updated in relation to the events planned during the academic year.

Doctoral students are also constantly encouraged to participate in seminars, conferences and national and international conventions as speakers and/or discussants; they are also encouraged to publish their contributions to these seminar activities and the preliminary results of their research activities, giving preference to class A journals and to contributions to collective works promoted by scholars of the various areas of national and international renown, favoring – where possible – the dissemination of research products in line with the open access policy promoted by the University.

PhD students are required to participate in learning activities – which include planned teaching activities, seminar and workshop activities, research activities and publication of research results, as well as supplementary teaching activities (up to 40 hours per year) – to achieve 60 ECTs per year, for a total of 180 ECTs over the three-year period. The ECTs will be allocated on the basis of the Credit Allocation Table in Annex 1 of the PhD Course Design Document in ‘Systems Dynamics’.

The PhD Course also contributes to the strengthening of national and international scientific relations and offers doctoral candidates international mobility opportunities of adequate duration in line with their research project at qualified academic and/or industrial institutions or at public or private Italian and international research organizations.

More specifically, doctoral students are required to carry out research periods abroad at renowned international research institutions: e.g. Institute of Advanced Legal Studies, London; Jesus College, Cambridge; Swiss Institute of Comparative Law, Lausanne; London School of Economics and Political Science, London; Max Planck Institute, Munich.

The period abroad for research purposes generally takes place in the second year of the course and lasts on average 6 months (min. 3 months - max. 12 months).

Doctoral students are provided with adequate financial and structural resources to carry out their research activities. For further details, please refer to the tables below.

| | | | |
|---|---|--|-----------------------|
| <p>Amount of each scholarship position (annual amount before social security charges payable by the recipient)</p> | <p>(1) 16,243.00 EUR</p> | <p>Total amount (EUR): (1) x (H-D) x no. of course years</p> | <p>438,561.00 EUR</p> |
| <p>Per capita annual budget per place with and without scholarship for research activities in Italy and abroad consistent with the research project (in % terms of the annual value of the scholarship before social security charges payable by the recipient)</p> | <p>(10% minimum of scholarship amount; 20% minimum for national doctorates): 10.00%</p> | | |
| | <p>(2) 1,624.30 EUR</p> | <p>Total amount (EUR): (2) x (G-D) x no. of course years</p> | <p>58,474.80 EUR</p> |
| <p>Additional amount per month of research period abroad for each place with and without scholarship (in % terms of the monthly value of the scholarship before social security charges payable by the recipient)</p> | <p>(50% minimum of the monthly scholarship amount): 50.00%</p> | | |
| | <p>Months (maximum 12, or 18 for co-tutored and foreign universities doctorates): 6.00</p> | | |

| | | | |
|--|-------------------------|----------------------------------|------------------------------|
| | (3) 4,060.75 EUR | Total amount (EUR): (3)x(G-D) | 48,729.00 EUR |
| Overall BUDGET of the doctoral course | | | <u>545,764.80 EUR</u> |

(2): (annual scholarship amount * % monthly scholarship amount)

(3): (% monthly scholarship amount * (annual scholarship amount/12) * foreign months)

Sources of doctoral course budget coverage (including scholarships)

| SOURCE OF FUNDING | Amount (EUR) | % Coverage | Type description (max 200 characters) |
|--|---------------------|-------------------|---|
| University funds (the lead partner in case of an associated form) | 172,732.80 | 31.65 | <i>own funds</i> |
| MUR funds | 193,032.00 | 35.37 | 120,000 EUR Ministerial Decree 351/2022 73,032.00 EUR Fund for the regular financing of the universities (FFO) |
| of which PNRR funds, if any | 120,000.00 | | 120,000.00 EUR Ministerial Decree 351/2022 |
| Funds from other ministries or other public/private entities | | 0.00 | |
| of which PNRR funds, if any | | | |
| Funds from nationally or internationally competitive calls for proposals | | 0.00 | |
| Funding from other entities participating in the agreement/consortium (in case of associated doctoral programs) | 180,000.00 | 32.98 | 120,000.00 EUR Shanghai University - 2 Scholarships Allocated directly to selected doctoral students 60,000 EUR University of Hanoi - 1 Scholarship Allocated directly to selected doctoral students |
| Other | | 0.00 | |

| SOURCE OF FUNDING | Amount (EUR) | % Coverage | Type description (max 200 characters) |
|--------------------------|---------------------|-------------------|--|
| Total amount | 545,764.80 | | |

Please refer to the table below for details of doctoral scholarships allocated during the XXXIX cycle.

| LAST NAME | FIRST NAME | SCHOLARSHIP | TOPIC-SPECIFIC |
|------------------|-------------------|---|-----------------------|
| MACHI' | ANDREA | Scholarships funded by Ministerial Decree 118/2023 | 118.PNRR.UNIPA |
| PERGOLIZZI | VALERIO | Scholarships funded by Ministerial Decree 118/2023 | 118.PNRR.UNIPA |
| FIDUCCIA | FABIO | Scholarships funded by Ministerial Decree 118/2023 | 118.PA.UNIPA |
| MODICA | FELICIA | Scholarships funded by Ministerial Decree 118/2023 | 118.PA.UNIPA |
| MISTRETTA | GIOVANNI | Scholarship funded 80% by the University of Palermo and 20% by the Giannina Gaslini Institute | GASLINI |
| GIACCONE | GAIA | Scholarships funded by the University of Palermo | UNIPA |
| GALLINA | MARCO | Scholarships funded by the University of Palermo | UNIPA |
| ALBANESE | ANTONINA | Scholarships funded by the University of Palermo | UNIPA |

For the reimbursement of mission expenses, doctoral students can benefit from a share that comes partly from university funds – corresponding to the annual sum of about 800.00 euros – and partly from the Doctoral Operating Fund.

The PhD course provides doctoral students with facilities and scientific resources suitable to carry out study and research and adequate for the number of doctoral students of the course (see table below).

| | | |
|--------------------------------------|--------------------|--|
| Equipment and/or laboratories | | <ul style="list-style-type: none"> - Computer room located on the mezzanine floor of the DEMS Department; - David Sassoli reading room of the DEMS Department; - Classrooms located in the DEMS Department building (former San Rocco College). See: http://www.unipa.it/dipartimenti/dems/luoghi.html |
| Book heritage | volumes amount and | <ul style="list-style-type: none"> - Library located in the DEMS Department. See: http://www.unipa.it/dipartimenti/dems/luoghi.html |

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|--------------------|--|--|
| | coverage of course topics | |
| | journal subscriptions (number, issues held, coverage of course topics) | <i>See the following Department website: http://www.unipa.it/dipartimenti/dems/ricerca/riviste.html</i> |
| E-resources | Databases (access to the content of sets of journals and/or publishing series) | <i>Access to all Unipa databases to support the scientific research activities of PhD students.</i> |
| | Software specifically relevant to the intended areas of research | <ul style="list-style-type: none"> - Computer room equipped with 25 Apple computer workstations and printer; - each workstation is provided with Microsoft Office package (Word, Excel, Access, PowerPoint) and Powersim Studio 7 simulation software (for building System Dynamics models); - Wi-Fi connection available throughout the DEMS headquarters facility (former San Rocco College); - access to online periodicals directly from the computer stations in the computer room. |