

Teaching Position Profile - Mathematics (shared with the Engineering Programme)

Teaching Profile (300 characters maximum - Galaxie)

Lecturer in mathematics and computer science for a Bachelor of Science and Engineering, teaching scientific computing, algorithms, probability and data. English-medium teaching, interest in educational innovation, teamwork, and links with the engineering programme.

Position Context

This position is part of the *European Bachelor in Infrastructure and Transitions*, a joint programme offered by the École nationale des ponts et chaussées (ENPC) and the Universidad Politécnica de Madrid (UPM), with İstanbul Teknik Üniversitesi (İTÜ) as mobility partner. Taught entirely in English, the programme is designed for an international intake of students entering higher education after secondary school and prepares them for careers in civil engineering and infrastructure, or for further study in France and internationally.

The successful candidate will teach mathematics and computer science across the curriculum, from Semester 1 to Semester 4 (first- and second-year undergraduate level). They will cover fundamental and applied mathematics, algorithms, scientific computing, statistics, data processing and, depending on their profile, an introduction to optimisation and operations research.

In addition to their teaching duties, the successful candidate will play a leading role in developing educational innovation within the programme.

Main Teaching Areas

The successful candidate will primarily teach the following subjects within the Bachelor of Science and Engineering:

- fundamental mathematics and abstract reasoning;
- engineering mathematics (analysis, linear algebra, differential equations);
- algorithms, programming and scientific computing;
- probability, statistics and data analysis;
- introduction to applied machine learning;
- mathematical modelling: problem formulation, analysis and solution.

In addition, they will contribute to tutoring and academic support for first-year students in the engineering degree programme. The School is seeking to diversify recruitment into its engineering programme, which requires enhanced support for these new profiles and for students from preparatory classes who may need specific assistance when adapting to a different mode of teaching.

Fluency in teaching in English is required.

Teaching Responsibilities

The successful candidate will contribute fully to the implementation and development of the programme. Working with the international partners, they will be expected to:

- design, update and deliver teaching amounting to 384 equivalent tutorial hours (HETD) per year, after any workload reductions granted, where applicable, for responsibilities held or research activities;

- contribute to the structuring of course content, teaching sequences and assessment methods;
- contribute to the overall academic coherence of the curriculum;
- implement teaching approaches suited to students entering higher education after secondary school, within a programme taught entirely in English;
- participate in academic committees and examination boards;
- coordinate and build a stable group of contributors in their disciplinary field;
- support students in achieving academic success and developing autonomy;
- contribute to academic support and tutoring for first-year students in the engineering degree programme.

Secondary Responsibilities - Educational Innovation within the Programme

In addition to their teaching duties, the successful candidate will act as the programme lead on educational innovation. This responsibility includes:

- facilitating collective reflection on teaching methods (active learning, competency-based assessment, blended learning and project-based learning);
- monitoring innovative teaching practices in scientific higher education, in France and internationally;
- contributing to the design and development of the programme's digital teaching tools and learning environments;
- serving as the internal point of contact for teaching practices and tools, in coordination with the programme management team.

A strong awareness of higher-education pedagogies and practices used in engineering schools is expected, particularly in relation to active learning, competency-based assessment and blended learning.

Teamwork and Contribution to the Programme

The position requires a strong ability to work collectively. The successful candidate will collaborate with the entire teaching team of the Bachelor programme and the engineering degree programme, contribute to coordination meetings and arrangements, and participate in promoting and developing the programme.

The successful candidate may be asked to represent the programme to a range of audiences: students and families in France and internationally, academic partners, scientific committees, and socio-economic stakeholders.

Candidate Profile

The position is open to either:

- *a holder of the French agrégation, or a secondary-school teacher assigned to higher education, in a discipline relevant to the teaching areas listed above. A PhD or research experience would be an advantage;*

or

- *a person holding a PhD in mathematics, or in a closely related field relevant to the teaching areas listed above. The successful candidate will be integrated into the institution's scientific environment and may, depending on their profile, contribute to*

research, innovation or knowledge-transfer activities related to the position. In this case, association with an ENPC laboratory may be considered.

The following qualities are particularly sought:

- a strong command of the fundamentals of mathematics and, depending on the profile, computer science or statistics;
- the ability to work in a multidisciplinary environment that includes engineering applications;
- a strong interest in educational design and innovative approaches to teaching mathematics and computer science in higher education;
- the ability to work as part of a team and coordinate teaching activities;
- confidence in teaching in English and working in an international and multicultural environment;
- the ability to adapt to diverse student groups, particularly young students at the beginning of higher education;
- the ability to design coherent learning progressions and teaching scenarios;
- proficiency in, or a strong interest in, digital teaching tools (computing environments, learning management systems and collaborative tools);
- openness to new teaching practices and to changes in the student population.

Employment Conditions

This position is open to researchers, academic staff with teaching and research duties, holders of the French agrégation, and secondary-school teachers assigned to higher education, on secondment or leave of absence.

Within the PRAG framework, the annual teaching load is set in accordance with Articles 3 and 5 of Decree No. 2025-742 of 31 July 2025 concerning primary- and secondary-school teaching staff assigned to public higher-education institutions under the authority of the minister responsible for higher education:

- 384 hours of tutorials or practical classes.
- Where lectures are assigned, they are counted, for the purpose of calculating the teaching load stated above, at one and a half equivalent tutorial hours (HETD) for each hour actually taught;
- Teaching duties include the preparation of classes and the assessment of students in the courses taught.
- The weekly teaching load may not exceed fifteen hours for holders of the French agrégation working as secondary-school teachers;
- The Director determines the individual teaching duties of these staff members in the interests of the service, following a reasoned opinion from the head of the academic unit after consultation of the unit council.
- Each teacher receives an individual teaching schedule at the beginning of the academic year. It may be adjusted for each teaching semester.

ADDITIONAL INFORMATION

Website: www.enpc.fr

Department: Education Directorate

Expected cohort size: 40 to 60 students

Place of work: École nationale des ponts et chaussées

6 and 8 avenue Blaise-Pascal - Cité Descartes -

Champs-sur-Marne - 77455 Marne-la-Vallée Cedex 2

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APPLICATION PROCEDURE

I - Application documents

The application must include the following documents:

1. Proof of identity
2. A detailed curriculum vitae
3. A copy of the official order confirming the candidate's most recent classification in the corps and grade of secondary-school teaching staff
4. A copy of the most recent appointment order
5. For staff in a status other than active service, a copy of the official order specifying their administrative status (secondment, leave of absence, leave, deferred appointment, unpaid leave, etc.)
6. A cover letter

II - Submission of applications

To apply, please use the following link : <https://jobs.layan.eu/fr/offer-of-ecole-nationale-des-ponts-et-chaussees-no-111607>