# MASTER OF SCIENCE IN APPLIED ECONOMICS (MScAPEC), 90 ECTS
## MASTER OF SCIENCE EN ÉCONOMIE APPLIQUÉE, 90 ECTS
### OPTIONAL MAJOR IN : ENERGY AND ENVIRONMENTAL POLICY / DATA SCIENCE

*In effect since the 2024-2025 academic year*

**unine**
Université de Neuchâtel
Faculté des sciences économiques

| Code | MScAPEC | Instructor | ECTS | Semester | H/week | Grading policy | Status |
|---|---|---|---|---|---|---|---|
| **Module : Economic tools in practice** | | | | | | | |
| 5ER2028 | Microeconomic Policy | M. Farsi | 6 | Autumn | 4 | E | Compulsory |
| 5ER2050 | Behavioral Economics | C. Zihlmann; S. Khelifa | 3 | Autumn | 2 | EI+E | Compulsory |
| 5EN2022 | Social Policy | D. Ilić ; T. Brändle | 3 | Autumn | 2 | EI+E | Compulsory |
| 5ER2041 | Topics in Labor Economics | M. Pecoraro | 3 | Autumn | 2 | EI+E | Compulsory |
| 5AF2017 | Applied Macroeconometrics | D. Kaufmann | 6 | Autumn | 4 | EI+E | Compulsory |
| 5ER2043 | International Economics and Trade Policy | J.-A. Monteiro | 3 | Spring | 2 | E | Compulsory |
| 5ER2010 | Economics of Regulation | B. Rime | 3 | Spring | 2 | E | Compulsory |
| 5ER2019 | Political Economy | P. Fortunato | 3 | Spring | 2 | E | Compulsory |
| 5ER2042 | Topics in Development Economics | J.-M. Grether ; M.L. Alzua | 3 | Spring | 2 | EI+E | Compulsory |
| 5ER2020 | Applied Microeconometrics | B. Lanz | 6 | Spring | 4 | EI+E | Compulsory |
| **Electives[1]** | | | | | | | |
| 5ER2017 | Global Public Goods[a] | J.-M. Solleder | 3 | Autumn | 2 | E | Elective |
| 5ER2016 | Public Policy Evaluation[a] | D. Kistler | 3 | Autumn | 2 | EI+E | Elective |
| 5MI2017 | Data Management[b] | I. Ciorascu | 6 | Autumn | 4 | EI+E | Elective |
| 3IN2078 | Machine Learning: Theory, Fairness and Privacy[b][d] | C. Dimitrakakis | 5 | Autumn | 4 | EI+E | Elective |
| 5ST2001 | Econometrics | C. Hasler | 6 | Autumn | 4 | EI+E | Elective |
| 5ER2048 | Monetary Policy in a New Era | F. Canetg | 3 | Autumn | 2 | EI | Elective |
| 5ER2032 | Energy Economics[a] | M. Farsi | 3 | Spring | 2 | E | Elective |
| 5ER2023 | Environmental Economics[a] | N. Mathys | 3 | Spring | 2 | E | Elective |
| 5ZZ2011 | Innovation and Technology Policies[a] | A. Mack | 3 | Spring | 2 | EI+E | Elective |
| 5MI2012 | Computational Thinking[b][2] | V. Macko | 3 | - | 1 week | EI | Elective |
| 5MI2018 | Machine Learning[b] | I. Ciorascu | 6 | Spring | 4 | EI+E | Elective |
| 5ER2051 | Health Economics and Policy | J. Marti | 3 | Spring | 2 | EI+E | Elective |
| 5ER2052 | International Finance and Macroeconomics | D. Kaufmann | 3 | Spring | 2 | E | Elective |
| 2GG2036 | Cours interdisciplinaire en changements climatiques et sociétés | L. Schneider | 5-6[3] | Spring | 2 | EI | Elective |
| **Total** | | | **60** | | | | |
| 5ER2047 or 5ER2046 | Master thesis or internship thesis[c] | | 30 | | | | |
| **GRAND TOTAL** | | | **90** | | | | |

[a] Required to obtain a major in "Energy and Environmental Policy".

[b] Minimum 14 ECTS among these courses required to obtain a major in "Data Science".

[c] To obtain a major, the thesis must be written on a topic in the corresponding field.

[d] Enrollment in the course and exam is subject to specific conditions and must be completed within the designated deadlines : Organization – Swiss Joint Master of Science in Computer Science (unibnf.ch)

[1] Students select elective courses in order to complete the required total of 60 ECTS. Elective courses that are not listed above require the program director's prior approval.

[2] Course offered before the spring semester. The enrolment must take place in IS-Academia before the deadline for the spring semester.

[3] See course description for the allocation of 6 credits

**The relevant terms** of **evaluation are specified in the course descriptions**

E: written exam during the exam session at the end of the semester. EI: evaluation organized during the semester

# LEARNING OUTCOMES

*On completion of this program, students will be able to:*

## Overarching skill

- Conduct and communicate evidence-based analysis to support economic decisions, from private decisions to public policies

## Knowledge and understanding acquired in the program:

- Work with a set of economic models that are useful for applied analysis
- Understand how causal relationships can be identified from economic data
- Exploit economic data for predictions

## Applying knowledge and understanding:

- Apply abstract analytical frameworks to real-world issues
- Construct datasets that are relevant to economic decisions
- Undertake econometric analyses with state-of-the-art software

## Making judgements:

- Assess theories and empirical evidence on a specific economic issue
- Formulate recommendations to prepare economic decisions or policies

## Communication skills:

- Define objectives and contributions of academic research to existing knowledge
- Combine different sources of information to form a coherent and sound argument
- Communicate results to specialists and non-specialists (orally and in writing)

## Learning skills:

- Adopt an analytical and scientific approach to solve individual or societal problems
- Establish contacts to gather the required information
- Contribute actively to teamwork and team-building