

EXAMINATION INSTRUCTIONS FOR THE ‘OPEN QUANTUM SYSTEMS’ COURSE PHYS3136

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1 Instructions

The exam consists of a theoretical understanding and numerical simulation of a physical phenomenon specific to open quantum systems and a public oral presentation (20 to 25 min) of your work, followed by a 10 to 15 min question and answer session. Your presentation should be accessible to anyone attending the course. The slides of your presentation and your functional and annotated code (preferably in Julia or Python, in the form of a **Jupyter** notebook) will be sent to the course teachers. Be sure to use the same notations as those used in the course.

2 Julia

Code editor

We strongly recommend that you code and run your scripts using the **VS Code** editor.

Julia language

The official documentation for the Julia programming language is available at <https://docs.julialang.org>.

Open quantum systems librairies

We recommend two Julia librairies for simulating open quantum dynamics : **QuantumOptics.jl** and **Quantum-Toolbox.jl**