



Modern Nuclear Theory, Master Level WiSe 2021/22

Instructors: Prof. Sonia Bacca (s.bacca@uni-mainz.de)
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The aim of this course is to provide students with a survey of modern nuclear theory at the graduate level. While the focus is on theory, when possible the subject will be linked to applications, e.g. to astrophysics.

Syllabus:

- Introduction to nuclei and nuclear forces
- Few-body methods for nuclei
- Many-body methods for nuclei
- Nuclear reactions
- Nuclear astrophysics and formation of the elements

The course will be held in English. References are also in English. Questions are welcome also in German. The homework problems will be designed to improve your understanding and to explore the topics covered in the lecture.

3V+1U

Monday - 12:15 to 13:45

Wednesday - 8:15 to 9:45

Teaching method: In person in Newton-Raum.

For questions please contact the instructors.