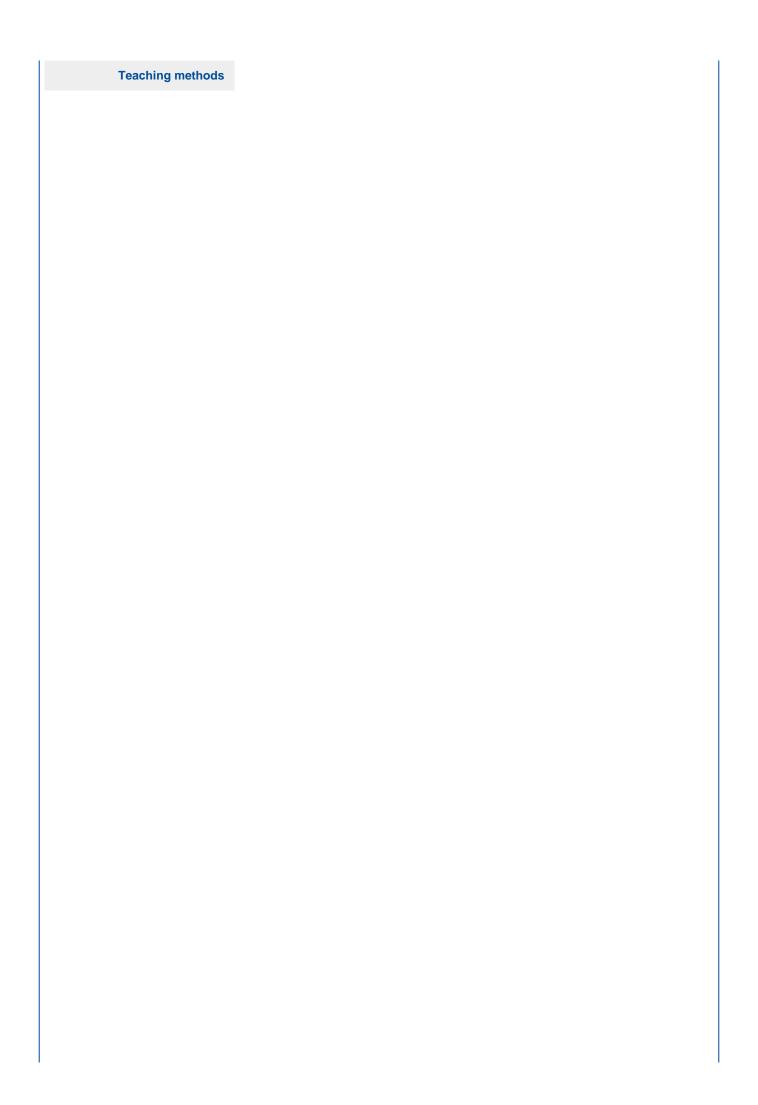
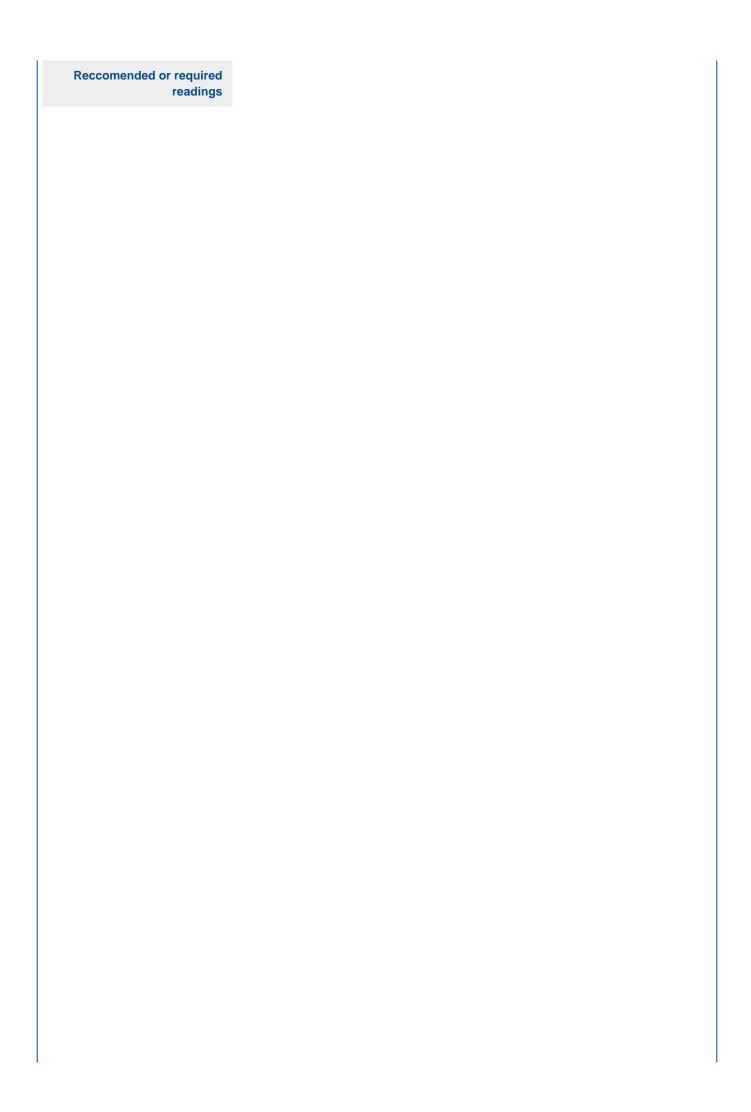


Anno Accademico 2020/2021

| NUCLEAR PHYSICS I | |
|---------------------|--|
| Enrollment year | 2019/2020 |
| Academic year | 2020/2021 |
| Regulations | DM270 |
| Academic discipline | FIS/04 (NUCLEAR AND SUBNUCLEAR PHYSICS) |
| Department | DEPARTMENT OF PHYSICS |
| Course | |
| Curriculum | Didattica e storia della fisica |
| Year of study | 2° |
| Period | 2nd semester (01/03/2021 - 11/06/2021) |
| ECTS | 6 |
| Lesson hours | 48 lesson hours |
| Language | Italian |
| Activity type | ORAL TEST |
| Teacher | GIUSTI CARLOTTA (titolare) - 6 ECTS |
| Prerequisites | A basic knowledge of quantum mechanics is required. |
| Learning outcomes | Learning and in-depth learning of some nuclear physics concepts. |
| | The course has a theoretical character. Aim of the course is not only to learn or deepen specific concepts or notions, but to learn a method to deal with nuclear physics from a theoretical point of view. |
| Course contents | The course deals with the problem of the nuclear interaction: its main and essential features, such as, for instance, its spin-dependence, its non central character, its charge independence, are deduced from the nucleon-nucleon scattering and deuteron properties. A realistic nucleon-nucleon potential is built and its behavior at short, medium, and large distance is discussed. In the last part of the course a short introduction to the many-body problem in nuclear physics is presented. |

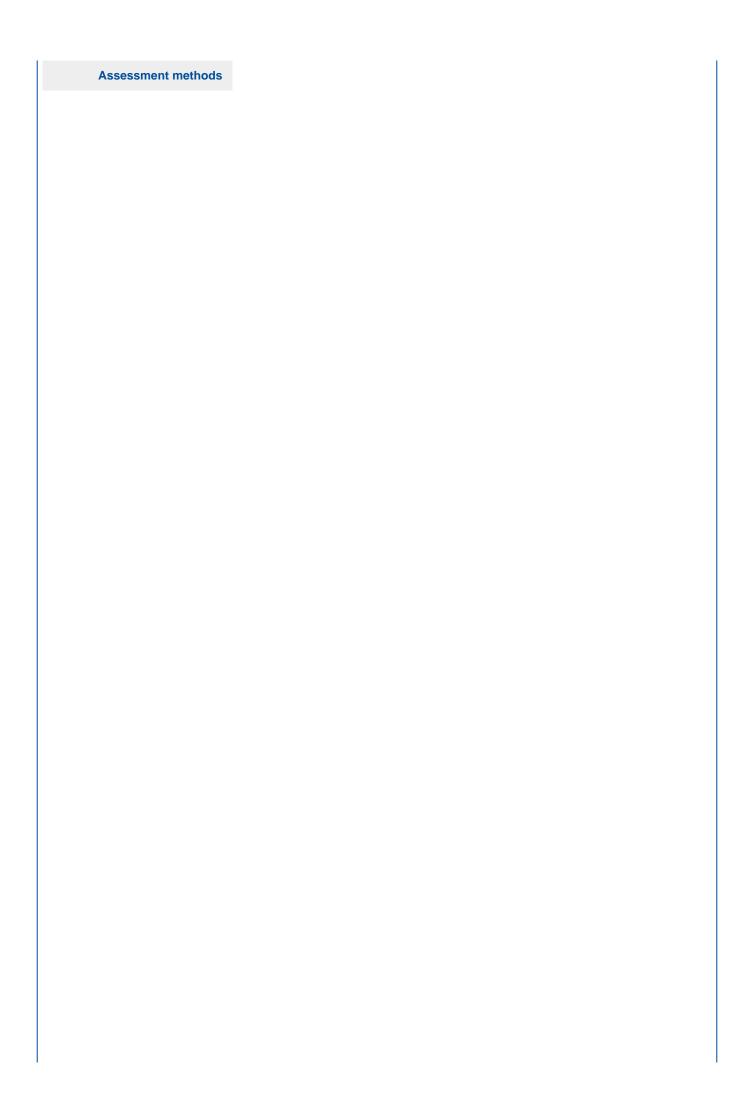


| Frontal lessons. Some lesson will have a seminar caracter. |
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M.A.Preston, R.K.Bhaduri: Structure of the Nucleus, Westview press.

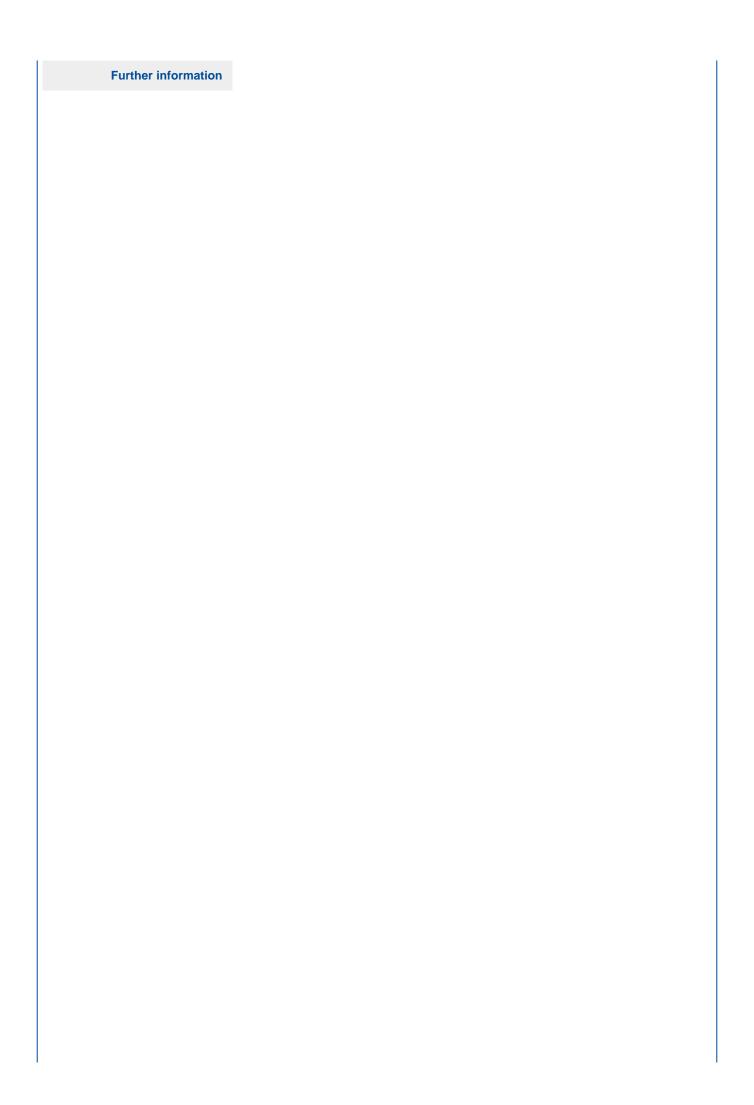
For the last part of the course it will be suggested to the interested students reading some review papers



Oral examination.

The student will be asked to give a short presentation on a topic of his choice within the course program. The evaluation will be given on the basis of the clarity and mastery of the presentation.

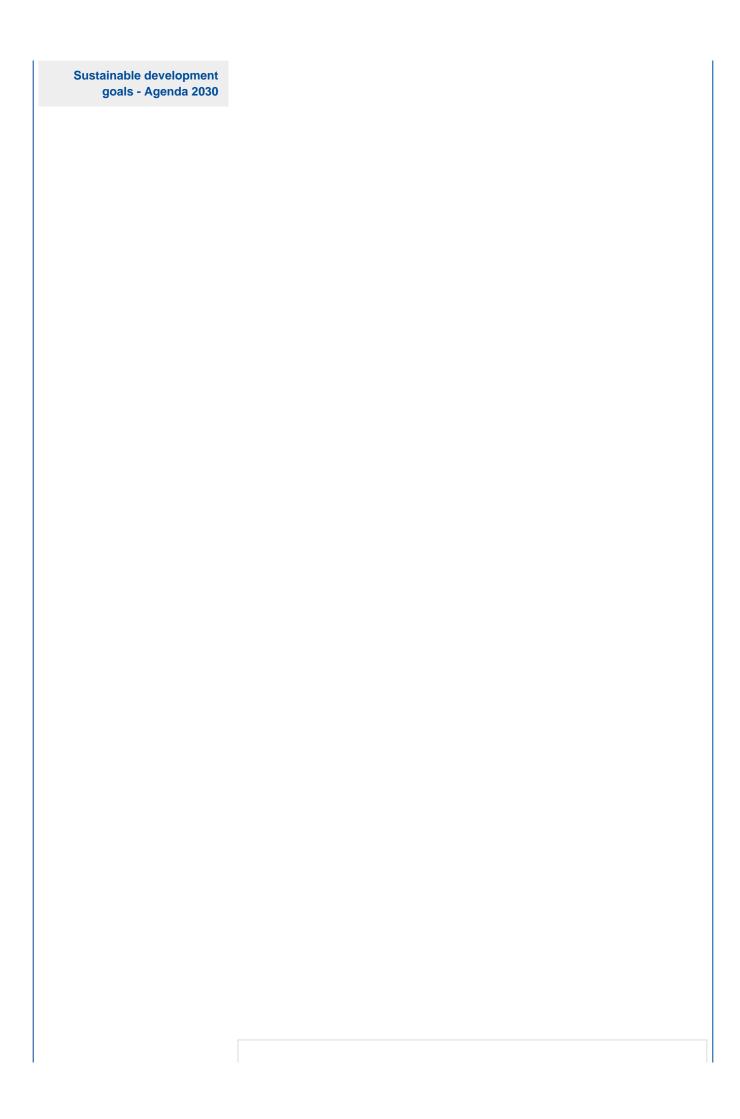
Another general question will be asked to check that also other parts of the program have been studied.



Oral examination.

The student will be asked to give a short presentation on a topic of his choice within the course program. The evaluation will be given on the basis of the clarity and mastery of the presentation.

Another general question will be asked to check that also other parts of the program have been studied.



\$lbl legenda sviluppo sostenibile