

**Course offered for the PhD program  
in Civil, Chemical and Environmental Engineering  
Curriculum in Chemical, Material and Process Engineering –  
a.a. 2019-2020 (cycles XXXIV, XXXIII and XXXII)**

(Possibility of participation for students in other PhD cycles or other PhD courses)

**1. Title**

**Multidisciplinarity, interdisciplinarity, and transdisciplinarity in Science: Healthcare Case Studies**

**2. Course Description**

The course will offer to the PhD students an overview of the concept of disciplinarity: intra, cross, multi, inter, trans in science. The course is intended to encourage scientist with different scientific backgrounds to work in a team to solve industrial grand challenges. The new disciplines of “Supply Chain Management” and “Smart Packaging” will be also introduced and different research case studies in healthcare based on the concept of teamworking will be demonstrated. At the end of the course and as the final exam, the scientists will be asked to work in a team and propose new research topics based on their learnings.

The course will include the following topics:

- Introduction of the concept of “Disciplinarity: intra, cross, multi, inter, trans” in science
- Introduction of the concept of “Supply Chain Management” as a multidisciplinary filed
- Introduction of the concept of “Packaging: passive, active, smart, and intelligent” as a multidisciplinary filed
- Case studies in healthcare
- Data survey
- Teamworking exercise

**3. Course Organization**

The course, organized into a single module, will consist of classroom lessons as well as case studies and teamworking.

**4. Teacher**

The course teacher will be Prof. Bahar Aliakbarian.

**5. Duration and credits**

This course will be **3** credits and it is consisting of 10 hours (2 sessions of 4 and 1 session of 2 hours)

**6. Activation mode and teaching period**

The course will be held only this year. Students can be registered by simple contact with the coordinator of the curriculum of Chemical, Material and Process Engineering (prof. Attilio Converti) by email (converti@unige.it). The course will be held during the first week of July 2019 (July 1<sup>st</sup> and July 2<sup>nd</sup> from 9:00 to 13:00 a.m. and July 3<sup>rd</sup> from 9:00 to 11:00

am), but the exact time schedule and classroom will be confirmed about 15 days before that data.

### **7. Deadline for registration**

Registration to the course must be made no later than June 10<sup>th</sup>, 2019. Students are requested to inform the coordinator of the curriculum of Chemical, Material and Process Engineering (prof. Attilio Converti) by e-mail (converti@unige.it) about their registration.

### **8. Final exam**

The final exam will consist of a written research proposal draft with multidisciplinary emphasis and an oral presentation of the proposed project. This will be done in a team of 2-4 members.