

Bien établir son contrat d'étude  
How to establish properly one's learning agreement

## **Description of the SGM (Material science and engineering) department**

- The SGM department is an interdisciplinary department which aims at teaching the materials science as well as their use in various domains (engineering).
- The department interdisciplinary teaching appears through the numerous categories of studied materials, spanning from the metals and their alloys to the organic materials (polymers...) through the semiconductors.
- The SGM training leads to a wide range of application domains such as structure materials (construction, building coatings ...) public transport (automobile, aeronautic...), biotechnologies (biocompatibility...), materials used for renewable energy (photovoltaic...) or information and communication technologies (nanoelectronic, optoelectronic, microsystems...)
- Thanks to the transversal skills proposed in this training, students will acquire a solid grounding in many other engineering fields :
  - Production : elaboration, overview, shaping and qualification of materials
  - Industrial Research and Development
  - Management
  - Consulting...

## **Structure of the teaching program**

- The teaching program at the SGM department is decomposed in three years. Humanities (languages, communication, sport) will be planned during the whole cursus. The 3<sup>rd</sup> year is dedicated to basic teaching modules (physic of solids, cristallography, chemistry...). The program will concentrate on material science (mathematics, mechanics of solids, IT...). The 4th year program focuses on material engineering (elasticity, combined elements, non-destructive testing...) together with material science lectures (mecanics, semi-conductors, metallurgy, polymers...). During the first two year (3<sup>rd</sup> and 4<sup>th</sup> year), the modules consist in general courses (CM) and exercise sessions called TD (tutorials in 3 groups of about 25 students). One of the exercise sessions groups will be taught in English. In addition to these modules, some practicals (TP) are planned (lab work of 3h in group of 3 students). The practicals are taught in French but exchanges in English are possible.
- The last year of the department (5<sup>th</sup> year) will only consists of general courses without any TD. Some practicals (TP) or final research projects (PFE) are proposed in french or english. The PFE lab works are held under the supervision of a professor and target industrial problematics. Exchange students can either start the PFE at the Fall or Spring semester. It is worth noticing that the last year is structured in 3 distinct platforms: MSD (structural materials), PPF (polymer and formulation), SCM (semiconductors and microsystems). Each platform proposes and manages its own PFE and TP. The Fall semester starts in September and ends at the beginning of March. The Spring semester will last from the beginning of March to the beginning of September. The Spring semester is dedicated to the final industrial internship.

## How to constitute the Learning Agreement (LA):

- The complete teaching offer of the SGM department is available at :

<https://exchange-student.insa-lyon.fr/>

More information at : <https://www.insa-lyon.fr/fr/formation/diplomes/ING>

Select the language and then the « Science et Génie des Matériaux » option.

- Exchange students are allowed to pick up courses from any year of the SGM program. The main constraint is to avoid timetable conflicts between courses from the different years (3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>). For this purpose, it is necessary to consult first the courses timetable from the department. The courses schedules are organized for the whole students of the SGM department. The exercise sessions (TD) and the practicals (TP) are held in smaller groups. Exchange students can choose these according to their timetable.
- Exchange students are also allowed to choose 1 or 2 courses in another department of INSA or in master programs (such as Nanoscale Engineering – NSE). Again, please limit your choices according to your timetable in order to avoid conflicts between the offer from the different departments and the SGM offer. For this reason, you need first to consult the course timetable from the other departments by contacting the different secretaries.
- One last important point to mention is that the last year (5<sup>th</sup> year) is structured in three distinct platforms, specifically for the organisation of the practicals and the introduction to research projects in laboratory. The organisation of 5th year courses is linked to the three platforms offer. Exchange students are absolutely free to choose their lectures. Since a large choice of course is proposed, be very careful to anticipate any timetable conflict

Please note that the course GEMA (management) is designated as a 1<sup>st</sup> or 2<sup>nd</sup> semester course while it is actually a full year course which is available ONLY to students staying the WHOLE year at the INSA.

In case you need some more information, feel free to contact the professor in charge on the exchange students at the SGM department:

Pr. Abdelkader SOUIFI

[abdelkader.souifi@insa-lyon.fr](mailto:abdelkader.souifi@insa-lyon.fr)