**Annex 4. Questionnaire for survey among employers**

1. Do you think that graduates in Physics are well prepared for jobs in your company?
2. If not, could you give below a short list of what you feel is missing to their knowledge/skills/competences.
3. According to your strategic development, could you foresee general orientations for your needs in terms of science engineering (robotics, nanotech, smart materials, etc.)? That would help to design future educational offer in those fields.
4. How would you rate the level of satisfaction by graduates at different level of academic degrees?
   * B. Sc. level ?
   * M. Sc. level ?
   * PhD level ?
5. Please, order hierarchically within the table below at least 5 among the generic competences and 5 among the professional competences.

**Bachelor of sciences in Physics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Generic competences** |  |  | **Professional competences** |  |
| **1** | Ability to communicate effectively in writing and orally in first and one foreign language |  | **1** | Mobilize fundamental concepts in order to simulate, analyze and solve simple physics problems. |  |
| **2** | Ability for abstract thinking, analysis and synthesis, and to develop argumentation with critical mind. |  | **2** | Identify and lead independently the different steps of an experimental approach using common devices and techniques in the different fields of physics. |  |
| **3** | Ability to identify, select, analyse and summarize various specialized resources to document a subject |  | **3** | Analyze and exploit experimental data, taking into account sources of errors and uncertainty and probe a model by comparing its predictions to the experimental results |  |
| **4** | Ability to use digital tools of reference and rules of computer security to acquire, process, produce and disseminate information as well as to collaborate internally and externally |  | **4** | Use a programming language and analysis software with a critical mind to collect and exploit data |  |
| **5** | Ability to plan and organise one’s own activities, self-learning and skills enhancement |  | **5** | Use the main mathematical tools relevant for physics. |  |
| **6** | Ability to act with social and environmental responsibility, civic awareness and ethical reasoning |  | **6** | Apply concepts and experimental methods of physics in various fields of applied physics |  |
| **7** | Able to step back from a situation, self-evaluate and questioning himself in order to improve knowledge and skills |  | **7** | Identify specific regulations and implement the main prevention measures in terms of health, safety and environmental responsibility |  |
| **8** | Ability to establish their role and mission within an organization, to adapt and take initiatives. |  |  |  |  |
| **9** | Ability to work as part of a team while being independent and responsible with respect to a project |  |  |  |  |

**Master of Sciences in Physics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **GC** | **Generic competences** | **Ranking** | **PC** | **Professional competences** | **Ranking** |
| **1** | Ability to work in a team, in an interdisciplinary and international environment |  | **1** | Document in an exhaustive and synthetic way an emerging research subject in his field of competences |  |
| **2** | Ability to address and respond well to situations in a new and original ways within the given context |  | **2** | Identify, analyze and assimilate the main concepts of the new research theme |  |
| **3** | Ability to identify, analyse and define the significant elements constituting a problem in order to solve it effectively and with good criteria |  | **3** | Build, plan and implement a starting research project |  |
| **4** | Ability to do fundamental and applied research and apply its results independently for solving tasks in new or unfamiliar environment, implement innovations |  | **4** | Design and implement an experimental and/or theoretical approach on a research problematic of its disciplinary field, using autonomously experimental methods and adapted scientific equipments. |  |
| **5** |  |  | **5** | Formatting and presenting research results according to international standards of the field for oral presentation and publication in A level scientific reviews |  |
| **6** |  |  | **6** | Integrate and contribute autonomously to a collaborative research project |  |