## Course offered for the STAT PhD program starting from a.y. 2019/2020

| TITLE                   | Advanced techniques for gene expression profile analyses and next generation sequencing of genomes in living organisms  |
|-------------------------|---|
| Lecturer                | Sonia Scarfì  |
| Duration and<br>Credits | 2 CFU   |
| Course<br>description   | The course will be divided into two parts, in the first part the basic and<br>advanced techniques of gene expression analysis on living organisms will<br>be explained giving examples of applications in diagnostic and basic<br>research related to the human, as well as the animal and vegetal world.<br>In the second part of the course, starting from the first generation<br>sequencing techniques we will move to the variegated next generation<br>sequencing world giving examples of application to the human, as well as<br>animal and vegetal genomes.<br>The learning outcomes of this course will be the acquisition of a basic<br>knowledge of these useful techniques and it will give the students the<br>means to learn how and when use them in their biology research projects<br>both in basic as well as in applied research. |
| Course<br>organization  | The course will be organized into 4 frontal lessons with "in itinere" tests and exercises at the end of each lesson to evaluate the student participation and learning outcomes   |
| Teaching period         | Spring-summer (anyway after the course held by prof. Pozzolini)   |