**Description of Capstone AY2019/2020 – MATHEMATICAL, COMPUTATIONAL & STATISTICAL SCIENCES**

# **Structure of Proposal**

The proposal should state the following.

*Student*:

*Supervisor*:

*Title*:

*Subject Areas*: Robotics, and Software Engineering

*Challenges*: The Supervisor’s perception of aspects of this project may disagree with how students perceive it (e.g. numerous abstract proofs or advanced coding skills could affect the completion of the project). Such challenges should be carefully discussed towards finding a consensus between students and Supervisors.

Refactoring of existing program without impacting end users

Benchmarking SLAM within the framework

*Scope*: The primary aim of the project is to contribute to the student’s intellectual development. Likewise, for a project associated to an internship, the Supervisor needs to ensure that the student’s education is paramount. Joint publications with the supervisor resulting from the project are encouraged, but they should not be obtained at the expense of the primary aim.

Scope -> real-life use case of SE problem, open-source project, no-existing solution, C++, SLAM Bench, Computer vision, large project, communicate with distant partner

*Expectations* *associated with grade achievement*: Students should be informed about what kind of material the thesis should contain in order to lead to an A- grade. The prerequisites, the co-requisites, and the initial references must be made clear from the beginning.

*Time allocation*: Typically, supervision occupies about 1 contact hour weekly or every other week (with considerable week-to-week variation and depending on supervisor). Contact time should not consist of lectures by the Supervisor. It is more profitable to have Q & A between Supervisor and student, with both asking/answering questions.

**Deadlines**

Written incremental reports prepared by the student must be shown to the Supervisor and submitted to the Head of Studies **at or before 5:00 pm** on the following dates:

**Reports:**

Capstone Proposal: 16th Sept 2019 at 5pm

Report 1: 15th November 2019(Friday, Week 13) – 30% weight

Final Thesis Submission (40% weight) marked by supervisor and an independent examiner: 3rd April 2020

Unjustified delays in handing in the reports will be penalized as follows:

Within 24 hours: 5 marks will be taken off

Within 48 hours: 10 marks will be taken off

Within 72 hours: 20 marks will be taken off

After that a ZERO mark will be awarded

**Attendance to Capstone Seminars and Participation (5%)**

**Presentations:**

Semester 1 Presentation (5% Weight): 5-6 Minutes

Final Presentation in Semester 2 (20% weight): 20 minutes then 5 minutes for questions. Marked by two independent assessors