Information for the Course Project

[15 Marks]

Go through the course material and select one of the below topics

List of topics:

1. Ferroelectric Field-Effect Transistor non-volatile memory applications
2. Pyroelectric and electrocaloric effect for energy harvesting and cooling applications.
3. Spin transfer t
4. Torque STT-MRAM non-volatile memory devices.
5. Giant Magnetoresistance Sensor
6. Spin-Orbit Torque (SOT) MRAM non-volatile memory
7. FRAM Smart cards.
8. Voltage Controlled Magnetic Anisotropy VCMA-MeRAM

How to design your course project?

1. Get familiar with the state of the art knowledge in your Project application.
2. Identify the gap and the unresolved problem in this topic.
3. Get familiar with the key finding and debates on the topic.
4. Explain in detail the working principal of the elected application, basic concept, and related course materials.
5. If this would be your research idea, how would you contribute to the field?

Teams:

- We highly encourage teamwork;
- The default is a group of 4-5 students. If you wish to work alone, please discuss with us.
- Participation of all team members is obligatory.

Deliverables:

1.Report: you are required to submit a report on the topic with the below outline:

1. Abstract
2. Introduction & literature review covers the items as mentioned above
3. Methodologies
4. Conclusion
5. References you use in your project study

Your report should be in Times New Roman, Headings: 14, paragraph text: 12, and single line spacing.

2. **Presentation:**

A maximum of 10 min per group PowerPoint presentation is required to demonstrate your project