GEORGIA TECH EUROPE
GEORGIA INSTITUTE OF TECHNOLOGY
School of Electrical and Computer Engineering
ECE 6456
Solar Cells
Spring Semester 2026

Course objective To provide a practical understanding of semiconductor materials and technology as it relates to the design and development of efficient solar cells and photovoltaic systems.

Course outline

- Introduction on Solar Cells & Sunlight
- Review of Semiconductor Properties
- Junction and Operating Principles of Solar Cells
- Efficiency Limits & Losses in Solar Cells
- Main Solar Cell Technologies & Fabrication
- Design of High Efficiency Solar Cells
- Photovoltaic Systems Design & Implementation

Lectures
This course is 3 SCH. Lectures are 1:15 hour, scheduled days TBC.

Instructor Dr Bertrand P. Boussert, office 225
Phone: +33 (0)38 720 3947
Email: bb130@gatech.edu

Office hours The office hours will be scheduled day and time TBC.

Books, handouts All class handouts are available from Canvas.

Course resources The course resources like keynote files, homeworks and solutions, extra resources will be posted on Canvas. Come to class with the power points of the lecture that will facilitate your access to material and to take notes.

Honor code GT Academic Honor Code is strictly enforced at GT Europe. Adherence to the Georgia Tech Honor Code is expected and all suspected instances of academic misconduct will be reported to the Dean of Students. It is your responsibility to ask for clarification if collaboration guidelines, test-taking policies, etc. are not clear. You will find detailed information at http://osi.gatech.edu/content/honor-code.

Course Delivery All classes will be taught in-person.

Attendance policy This class is a core course of your curriculum, you better have to be present. Attendance will be taken at the beginning of each class. For more information about class attendance at Georgia Tech, you may go to http://www.catalog.gatech.edu/rules/4/.

Student-Faculty Expectations Agreement At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See http://www.catalog.gatech.edu/rules/22/ for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Major Emergencies If you have some sort of major life emergency - serious illness or injury, death in the family, etc. - that seriously impedes your progress in the class, please let me know as soon as possible so we can work something out. Don't disappear with no warning half way through, making me think that you dropped the class, and then reappear out of nowhere the week before finals asking what you can do to make things up.

Disabilities Georgia Tech offers accommodation to students with disabilities, this policy is extended to GT Europe. If you need any accommodation, then inform Mrs Corinne Guyot with a certificate from the Office of Disability Services (ODS).
If you have been approved by ODS for an accommodation, I will work closely with you to understand your needs and make a good faith effort to investigate whether or not requested accommodations are possible for this course. If the accommodation request results in a fundamental alteration of the stated learning outcome of this course, ODS, academic advisors, and the school offering the course will work with you to find a suitable alternative that as far as possible preserves your progress toward graduation.

Miscellaneous In classroom, the cellphone is turned off or in Do Not Disturb or Airplane mode, no food or drink during class time. You can use your laptop to take notes but not for gaming.

Grading Your grade will be determined using the following weighting.

Homeworks	10%
Project	30%
Midterm	30%
Final	30%

The final grade will be curved based on your attendance, performance and participation. Over two unexcused absences, no curving will be applied.
In case of a health issue that prevent you taking an exam, I will require a note from a doctor before rescheduling the exam otherwise you will have an F to the exam.

Miscellaneous In classroom, the cellphone is turned off or in Do Not Disturb or Airplane mode, no food or drink during class time. You can use your laptop to take notes but not for gaming.

Assignments Assignments and solutions will be posted periodically on Canvas.

Important dates A tentative calendar is proposed below, the date of the midterm will be confirmed 2 weeks in advance.

First Day of Class	Jan 13
Midterm	Mar 12
Last Day of Class	Apr 28
Final Exam	Apr 30 - May 7