

Course «Contact Mechanics and Elements of Tribology»

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February 7-11, 2022

Hybrid mode: @ Centre des matériaux, Evry and in Zoom.

Monday, February 7

9h00 – 10h30	Lecture: «Industrial Applications»
10h30 – 10h45	Break ☺
10h45 – 12h15	Lecture: «Mechanical Contact»
12h15 - 13h30	Lunch break
13h30 - 16h30	Blackboard «Flamant's problem»

Tuesday, February 8

9h00 – 10h30	Lecture: «Contact and Mechanics of Materials»
10h30 – 10h45	Break ☺
10h45 – 12h15	Lecture: «Contact at Small Scales: Surface Roughness»
12h15 - 13h30	Lunch break
13h30 - 16h30	Practical work «Numerical Integration of Flamant's Solution (Python)»

Wednesday, February 9

9h00 – 10h30	Lecture: «Contact at Small Scales: mechanics and transport»
10h30 – 10h45	Break ☺
10h45 – 12h15	Lecture: «Computational Contact Mechanics»
12h15 - 13h30	Lunch break
13h30 - 16h30	Practical work «Implementation of finite element contact algorithms (Python)»

Thursday, February 10

9h00 – 10h30	Lecture: «Fretting and Wear» (by H. Proudhon)
10h30 – 10h45	Break ☺
10h45 – 12h15	Lecture: «Lubrication and Sealing»
12h15 - 13h30	Lunch break
13h30 - 16h30	Practical work «Analytical and numerical solving of contact problems (Blackboard+Python)»

Friday, February 11

9h00 – 9h40	Seminar on a cutting edge research in Contact Mechanics and Tribology #1
9h45 - 10h30	Seminar on a cutting edge research in Contact Mechanics and Tribology #2
10h30 – 10h45	Break ☺
10h40 – 11h25	Seminar on a cutting edge research in Contact Mechanics and Tribology #3
11h30 - 12h15	Seminar on a cutting edge research in Contact Mechanics and Tribology #4
12h15 - 13h30	Lunch break
13h30 - 16h00	Online written exam
16h00 - 16h30	Conclusion

FYI: all slides and scripts of the course are available on www.yastrebov.fr/teaching.html