



**Schedule:** March 1<sup>st</sup> – May 17<sup>th</sup> 2022  
**Time:** Tuesday 12.15 - ca. 15.00 (lecture + exercises)  
**Online teaching** <https://aalto.zoom.us/j/69286267830>

<b>Teachers:</b>	D. Sc. Kari Stadius	email: kari.stadius@aalto.fi	room 2195 (MT8)
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**Mandatory course registration with Sisu! (lectures)**

### **Content**

After the course the student is familiar with the basic IC structures used in RF IC design and is capable of using these in different building blocks. In addition, the student knows special features of linear and non-linear integrated high-frequency circuits in RF design and is familiar with RF IC system design basics.

### **Study methods**

In this course we emphasize the learning principle “learning by doing”. This means that students are encouraged to do self-learning and with many exercises students familiarize themselves with practical RF IC design. Number of lectures is reduced to six to keep the work load reasonable and there will be no final exam. Mandatory participation on lectures is required to successfully complete the course. Each meeting consists of the following segments:

- Lecture: introduction to the topic
- Guidance on CAD exercises (simulations)
- Guidance on homeworks (calculations)
- Self-learning assignments (references or essays, find answers to given questions)

### **Project work**

The course includes a larger design work, in which each student designs a receiver front-end. The topic details and more information will be given in the first meeting. Students will report their outcome in a short oral presentation in the final meeting. The CAD exercises are constructed in such a manner that they will provide appropriate skills to complete the project work.

### **Assessment methods and criteria**

Each assignment will be graded from 0 to 5. The overall course grade will be determined by the following weighting: project work (30%), Self-learning assignments (30%), homeworks (20%), and CAD exercises (20%). There will be no final examination.