



# 0. Presentation

Programming and Algorithms II  
Degree in Bioinformatics  
Fall 2018

# Instructors

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Ricard Gavaldà

Mostly theory

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Edelmira Pasarella

Mostly labs

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Course material:

<https://www.lsi.upc.edu/~gavalda/pa2.html>

# Sessions

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Wednesdays 15-17, labs

Fridays 15-17, theory

Plus 3-4 hours weekly on your own:  
reviewing theory & finishing labs

# Evaluation

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10% on self-assessment of lab sessions

max 500 chars in Moodle per lab session

to be entered  $\leq$  2 weeks after

15% Lab test 1, about 1 hour, **october 19th**

15% Lab test 2, about 1 hour, **november 26th**

60% final exam, **december 14th**

2nd chance exam, **january 11th**

January grade replaces dec. grade or whole course grade, whatever is best for you

# Material

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Theory slides and lab material:

<http://www.cs.upc.edu/~gavalda/pa2.html>

Notifications and grades:

Aula virtual ESCI

Please tell us when something is wrong

# Contents

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## 1. Analysis of algorithms

How to compare running times of algorithms.

Sorting, binary search, dictionaries and sets

## 2. Recursive programs

In order to understand recursion, you first must understand recursion

## 3. Abstract Data types. Object oriented programming

How to organize a large programs into manageable structures

## 4. C++ programming language

Programming closer to the machine