

# a campus with ideas portugal







# located in Portugal's central region













13600

5150 postgraduate



910 teaching staff



90 researchers



300 postdocs



630 non-teaching staff



nationalities (on campus)







canteens





- Implemented in 2006 in the Biomedical Sciences Degree (BCD)
- Teachers were introduced to the method by an external expert and had extensive training
- The implementation occurred togheter with the begining of the BCD
- No previous experience at all
- First 6 years 40 students/year; now 70 students/year





# **Course curricula and PBL**

| Year | 1st semester                     | ECTS | 2nd semester                           | ECTS  |  |  |  |  |  |  |  |
|------|----------------------------------|------|--|-------|--|--|--|--|--|--|--|
|      | From molecules to the organism 1 | 10   | From molecules to the organism 2       | 10    |  |  |  |  |  |  |  |
| 1    | Functional organic systems 1     | 8    | Functional organic systems 2           | 8     |  |  |  |  |  |  |  |
| '    | Health Sciences                  | 6    | Communication in health                | 6     |  |  |  |  |  |  |  |
|      | Medical Statistics               | 3    |  |       |  |  |  |  |  |  |  |
|      | Functional organic systems 3     | 10   | Functional organic systems 4           | 10    |  |  |  |  |  |  |  |
| 2    | Biopatology                      | 8    | Clinical pharmacology and therapeutics | 6     |  |  |  |  |  |  |  |
|      | Clinical Biotecnology 1          | 6    | Clinical Biotecnology 2                | 6     |  |  |  |  |  |  |  |
|      | Farmacology                      | 6    | Lab techniques in Biomedicine          | 8     |  |  |  |  |  |  |  |
|      |                                  |      | Health information                     | 6     |  |  |  |  |  |  |  |
| 3    | Clinical Training                | 30   | Free Option                            | 6     |  |  |  |  |  |  |  |
|      |                                  |      | Option 1, 2 and 3                      | 6,6,6 |  |  |  |  |  |  |  |





**Course curricula and PBL** 

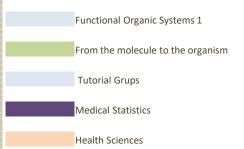
| Year | 1st semester                     | ECTS | 2nd semester                     | ECTS  |
|------|----------------------------------|------|----------------------------------|-------|
|      | From molecules to the organism 1 | 10   | From molecules to the organism 2 | 10    |
| 2    | 60 EC                            | TS   | in PBL                           | 8     |
|      |                                  |      | Поантиноппаноп                   | 6     |
| 3    | Clinical Training                | 30   | Free Option                      | 6     |
|      |                                  |      | Option 1, 2 and 3                | 6,6,6 |





# **OUR PBL**

|        | - 11 |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
|--------|------|---------------|---|-----|------|---|---|----|---|--------|------|-----|----------|----------|--------|-----|------|---|-----|--------|---|------|-------|---|---|---------|-------|----------|-----|---|--------------|---------------|-----|
| DA     | у    |               |   | Mor | nday |   |   |    |   |        | sday |     |          |          |        | Wen | sday |   |     |        |   | thur | rsday |   |   |         |       |          | Fri |   |              |               |     |
|        |      | Α             | В | С   | D    | Е | F | Α  | В | С      | D    | Е   | F        | Α        | В      | С   | D    | Е | F   | Α      | В | С    | D     | Е | F | G       | 1     | G        | 52  | G | 63           | G.            | 4   |
| Hou    | ır   |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 8H-9   | н    |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
|        |      |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 9H-1   | он   |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
|        |      |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 10H-1  | 1H   |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
|        |      |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   | Each 2  | ooko  |          |     |   |              |               |     |
| 11H-1  | L2H  |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   | EdCI1 Z | wecks |          |     |   |              |               |     |
|        |      |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 12H-1  | L3H  |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
|        |      |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 13H-1  | 11.  |               |   |     |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 14H-1  |      | <i>77777.</i> |   |     | 7/// |   |   |    |   | 777777 |      | ~~~ |          | 1////    | 777777 | ~~~ | ~~~  |   | ~~~ | *///// |   |      |       |   |   | 222     | 77777 |          |     |   |              | /////         | ~~~ |
| 1411-1 | .5"  |               |   |     | -    |   |   | l  |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     | • |              |               |     |
| 15H-1  | EU.  |               |   |     | -    |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     | • |              |               |     |
| 1311-1 | .01  |               |   | _   |      |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     | • |              |               |     |
| 16H-1  | 711  |               | _ | _   | -    | - |   |    |   |        |      |     |          | -        |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 1011-1 | ./"  |               |   | _   | _    | - |   |    |   |        |      |     |          | <u> </u> |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 4711.4 |      |               |   | _   |      | - | _ |    |   |        |      |     | <u> </u> |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 17H-1  | юн   |               |   |     | -    |   |   |    |   | l I    |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 4011.4 |      |               |   | _   | _    |   |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   |              |               |     |
| 18H-1  | 19H  |               |   |     |      | - | - |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   | $\vdash$     | $\rightarrow$ |     |
|        |      |               |   |     |      | - |   |    |   |        |      |     |          |          |        |     |      |   |     |        |   |      |       |   |   |         |       |          |     |   | $\vdash$     | $\rightarrow$ |     |
| 19H-2  | OH   |               |   |     |      | _ | - | -  |   | -      | -    |     |          | $\vdash$ |        | -   |      | - | -   |        |   |      |       |   |   |         |       | $\vdash$ |     |   | $\vdash$     | $\rightarrow$ |     |
|        |      |               |   |     |      | _ | L | ll |   |        |      |     |          | II       |        |     |      |   |     |        |   |      |       |   |   | ll      |       |          |     |   | $oxed{oxed}$ |               |     |







# **OUR PBL**

| DAy     |                   |                  | М | onday |    |    |   |   | Tues | lay        |   |     |   |   | Wer | nsday |   |    |   |         | thu | rsday        |   |            |         |    | Friday |    |    |
|---------|-------------------|------------------|---|-------|----|----|---|---|------|------------|---|-----|---|---|-----|-------|---|----|---|---------|-----|--------------|---|------------|---------|----|--------|----|----|
|         | Α                 | В                | С | D     | Е  | F  | А | В | С    | D          | Е | F   | Α | В | С   | D     | Е | F  | Α | В       | С   | D            | Е | F          | G1      | G2 |        | G3 | G4 |
| Hour    | -                 |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            | $\perp$ |    | _      |    |    |
| 8H-9H   |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 9H-10H  |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
|         |                   |                  |   |       |    |    |   | 1 |      | 4          |   |     |   |   |     |       |   | 1  |   |         |     |              | V | <b>-</b> 4 |         |    |        |    | 1  |
| 10H-11H |                   |                  |   |       |    |    |   |   | 5    |            |   |     |   |   | 1   |       |   | 51 | Ш | $\prod$ |     | $\leftarrow$ | 1 |            |         |    |        |    |    |
| 11H-12H | 1st year students |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
|         |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 12H-13H | 18 hours contact  |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 13H-14H |                   | TO HOUIS CONTACT |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
|         |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     | н     |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 14H-15H |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 15H-16H |                   |                  |   |       |    |    |   |   |      | <b>r</b> ( |   |     |   |   | ١I  | +     |   | 2  | ы | П       |     | 1            |   |            |         |    |        |    |    |
|         |                   |                  |   |       |    |    |   | 刀 |      |            |   |     |   |   | ,   |       |   |    | Ų |         |     |              |   |            |         |    |        |    |    |
| 16H-17H |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     | J            |   |            |         |    |        |    |    |
| 17H-18H |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 2011    |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 18H-19H |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 19H-20H |                   |                  |   |       |    |    |   |   |      |            |   |     |   |   |     |       |   |    |   |         |     |              |   |            |         |    |        |    |    |
| 19H-2UH |                   |                  |   |       | -  |    |   |   | -    |            |   |     |   |   |     |       |   |    | " |         |     |              |   |            |         |    |        |    |    |
|         |                   |                  |   |       | I- | l- |   |   | F    |            |   | - " |   |   | -   | -     | F | -  |   |         |     |              |   |            |         |    |        |    | T  |

Functional Organic Systems 1

From the molecule to the organism

Tutorial Grups

Medical Statistics

Health Sciences





### **ASSESSMENT**

|    | The Student   |   |   | NI |
|----|---|---|---|----|
| 1  | Worked and fullfilled the tasks proposed                | R | Y | Р  |
| 2  | Communicate his/her ideas                               | R | Υ | Р  |
| 3  | Used adequated references                               | R | Υ | Р  |
| 4  | Accepted criticisms and was a good group element        | R | Y | Р  |
| 5  | Came to the session                                     |   | Y | Р  |
| 6  | Arrived on time   |   | Y | Р  |
| 7  | Listen to the others                                    |   | Υ | Α  |
| 8  | Shared relevant information to the course objectives    |   | Υ | Α  |
| 9  | Made a pertinent evaluation of him/herself              |   | Υ | Α  |
| 10 | Made a pertinent evaluation of the others participation |   | G | Α  |
| 11 | Made good learning questions and specific objectives    |   | G | А  |
| 12 | Raised hipothesis                                       |   | G | Р  |
| 13 | Critically analysed the information                     |   | В | N  |
| 14 | Sinthesized and integrated the information              |   | В | N  |

P, positive; N, negative; A, acceptable

#### Insuficient

If N in any red

#### **Acceptable**

If there are no N in any red

#### **Suficient**

• If at least A to 7 yellows

#### Good

- If no N in any yellow
- And if at least P in 7 yellows

#### **Very Good**

- If P to all yellows
- And if no N in greens and P in at lesat 2 greens
- And if no N in blues

#### **Excelent**

- If P to all yellows
- And if P to all greens
- And if no N in blues and at least 1
  P in blues





The Student NI Insuficient
If N in any red

# This Student will have a SUFICIENT

13 Crucary anarysed the information N
14 Sinthesized and integrated the information N
15 N

And if no N in blues and at least 1
P in blues

n at

P, positive; N, negative; A, acceptable





- At first students are not used to be responsible for their own learning
- Huge gap between previous learning method (teacher centered) and PBL
- Students get anxious and need lots of support from teachers and older students
- We have an excelente learning environment
- It is very difficult to engage new teachers and older teachers in the process





At first students are not used to be responsible for

PBL is very hard to implement and is even harder to mantain with high quality standards

teachers in the process