

The Doctoral Credits (DC) measure the workload required of the Doctoral Student in research, training and teaching activities to obtain the title.

Each DC is worth 25 hours of commitment, and the PhD student must achieve 60 DCs per year.

The PhD Course establishes the minimum CD value to be achieved for each of the following activities:

- *disciplinary and multidisciplinary training,*
- *training relating to the acquisition of transversal skills,*
- *extra-curricular training for the growth of PhD students as members of a scientific community (summer school, PhD symposia, etc.),*
- *dissemination of research results,*
- *teaching activity.*

The PhD Course establishes its own criteria to determine the number of DCs to be assigned to individual activities, consistently with the practices of its disciplinary field and the University guidelines.

Finally, the Course establishes the recommended number of DCs to be acquired for training, dissemination and teaching in each year of the course, in order to guarantee the balanced performance of these activities with respect to research.

PhD students, in agreement with their supervisors and co-supervisors, flexibly define their specific training and research paths, choosing the activities to carry out, by type and quantity, in compliance with the constraints established by the Doctoral Board for each activity and course year.

The acquisition of DCs is verified at the end of the year, with rules and procedures established by the PhD Course.

The PhD course in Industrial Chemistry is characterized by a strong prevalence of experimental research activity, conducted in the laboratory; this is integrated by training and teaching activities.

Table A. Distribution of DCs between “research” and “training and teaching” (the latter including teaching activity provided by PhD students)				
Activity	Number of DCs	%		
Research	144	80		
Training and teaching	36	20		
Total	180	100		
Table B. Requirements for the distribution of DCs between the various “training and teaching” activities (overall 36 DCs, see Table A)				
Activity	Minimum number of DCs	Maximum number of DCs		
Disciplinary and multidisciplinary training (frontal lectures, seminars)	8	-		
Transversal skills	4	-		
Extra-curricular training (eg, participation to summer or winter schools)	1	-		
Dissemination (eg, participation to congresses)	2	-		
Teaching provided by PhD students and tutorships	0			
(a) Tutorship	0	-		
(b) Other teaching activities (ex: training of undergraduate students for their thesis)	0	4,8		
Table C. DCs for “training and teaching” to be acquired in the various years of the course				
DCs for “training and teaching” to acquire	Recommended	Minimum number		
At the end of the 1 st year	15	-		
At the end of the 2 nd year	30	-		
At the end of the 3 rd year	36	-		
Table D. Correspondence between hours of commitment and DCs acquired				
Activity	Hours in the classroom	Hours of autonomous study	Total	DC
Frontal lectures (Disciplinary and multidisciplinary training)	6	19	25	1
Lectures for transversal skills	6	19	25	1
Seminars with autonomous work	12	13	25	1
Seminars with participation only	25	0	25	1
Laboratory courses	6	19	25	1
Teaching provided by PhD students and tutorships	6	19	25	1
Extra-curricular training	1 day = 10 h			0,4
Dissemination	1 day = 10 h			0,4