Reunión de syllabus 20-08-27

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Empecemos recordando lo que se conversó la semana pasada

Erase una vez una maestría en nuestro continente

TAD = Clases presenciales
TI = Trabajo independiente

50h/semana x 16semana/semestre ~800h/semestre

Tabla 4. Plan de Estudios

nivel	código	Asignaturas	TAD*	TI**	Total horas	CRÉDITOS	Requisito
I		Asignatura Avanzada I	4	16	20	6	Ninguno
		Asignatura Avanzada II	4	16	20	6	
		Electiva I	4	16	20	6	
		TOTAL NIVEL I	**12**	**48**	**60**	**18**	
II		Asignatura Avanzada III	4	16	20	6	
		Asignatura Avanzada IV	4	16	20	6	
	25213	Seminario I	2	6	8	2	
		TOTAL NIVEL II	**10**	**38**	**48**	**14**	
III		Electiva II	4	16	20	6	25213
	25214	Investigación I	4	12	16	5	
	25215	Seminario II	2	6	8	2	
		TOTAL NIVEL III	**10**	**34**	**44**	**13**	
IV	25216	Investigación II	4	12	16	5	25214 25215
	25217	Seminario III	2	10	12	2	
	25218	Trabajo de investigación	-	-	-	-	
		TOTAL NIVEL IV	**6**	**22**	**28**	**7**	
		TOTAL DEL PROGRAMA:	**38**	**142**	**180**	**52**	

Propuesta de investigación

ECTS

What are ECTS points?

ECTS points, or ECTS credits, indicate the required workload to complete a study programme, or a module within a study programme. ECTS points *only* indicate workload; they do *not* indicate a grade.

Generally, each year of full-time study (or work, where applicable) is worth 60 ECTS credits. Usually this is divided by modules. So, for example, you might have 4 modules in a year with a similar workload, each of them worth 15 ECTS credits and thus adding up to 60 ECTS for the whole year.

ECTS points of modules are summed up to indicate the total workload for a study programme:

- **Bachelor's or undergraduate degrees** typically range from 180 ECTS (3 years full-time) to 240 ECTS (4 years full-time).
- **Master's degrees** typically range from 60 ECTS (1 year full-time) to 120 ECTS (2 years full-time).
- It's not as easy to say exactly how many credits a **PhD programme** will be made up of, due to their flexible-length work load.

How do ECTS credits convert to study hours?

A year of full-time studies at university level is generally worth 60 ECTS credits, and defined as equal to 1,500 - 1,800 hours of study work. This means **1 ECTS is equal to between 25 to 30 hours** (with the UK being one exception). The exact number of hours is different from country to country. A few examples:

- **United Kingdom:** 60 ECTS = 1,200 study hours → 1 ECTS = 20 study hours
- **Austria, Ireland, Italy, Malta:** 60 ECTS = 1,500 study hours → 1 ECTS = 25 study hours
- **Finland, Lithuania, Sweden:** 60 ECTS = 1,600 study hours → 1 ECTS = 27 study hours
- **Netherlands, Portugal:** 60 ECTS = 1,680 study hours → 1 ECTS = 28 study hours
- **Germany:** 60 ECTS = 1,800 study hours → 1 ECTS = 30 study hours

Of course, these values are just a guide. They do not only include "contact hours" (i.e. hours you spend in classrooms), but also the time you prepare, do homework and so on - so your individual study times could be different.

If you study part-time, the number of ECTS per semester or year will also be lower, reflecting the reduced workload.

If you are only signing up for 20 ECTS worth of lectures in a given semester, you will probably have lots of free time, while more than 30 ECTS will mean you might not see much of your friends.

Un ejemplo holandés

An example calculation of study load for a 10-ECTS (= 280 hours) first-year subject

- Lectures: two hours per week for eight weeks	16 hours
- Tutorials: two hours twice weekly for eight weeks	32 hours
- Tutorials (preparation): four hours per tutorial (16 tutorials)	64 hours
- Specific assignments: four six-hour assignments	24 hours
- Excursion	4 hours
- Library/archive assignment	4 hours
- Required literature: 665 pages at five pages per hour	133 hours
- Written examination	3 hours

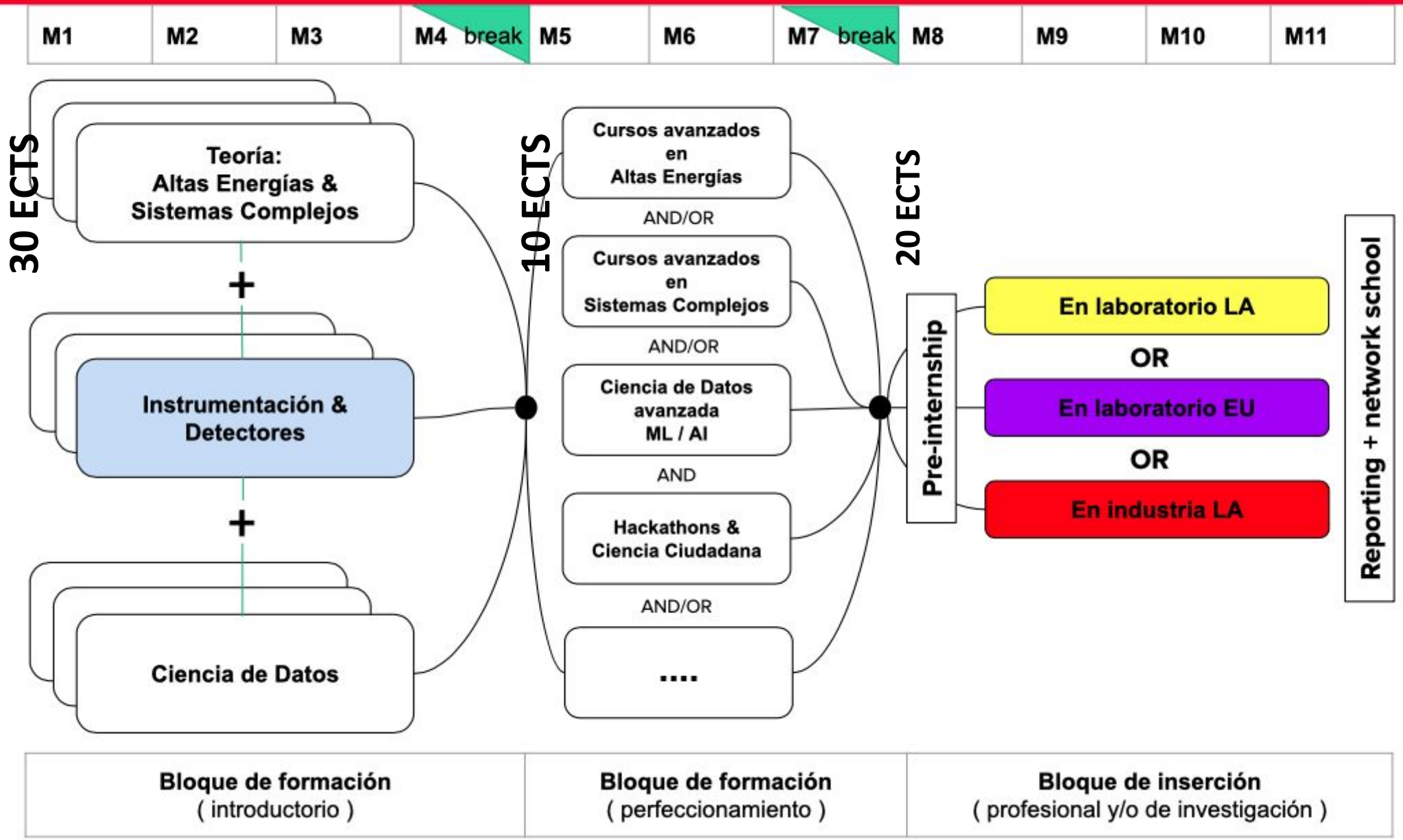
Total	280 hours

An example calculation of study load for a 5-ECTS (= 140 hours) second/third-year theme subject

- Tutorials: two hours per week for eight weeks	16 hours
- Tutorials (preparation): three hours per tutorial (eight tutorials)	24 hours
- Required literature: 350 pages at five pages per hour	70 hours
- Paper	30 hours

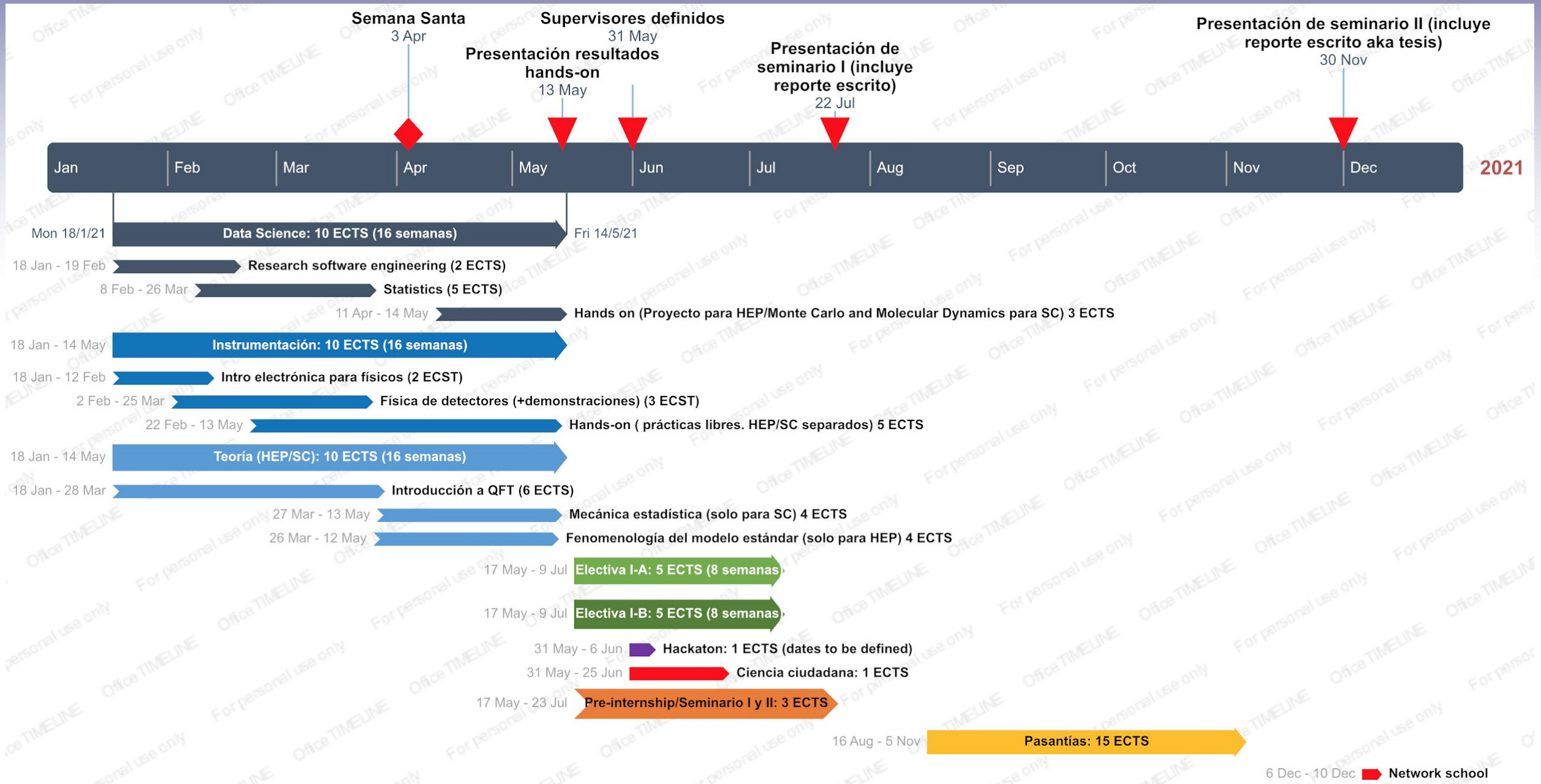
Total	140 hours

LA-CoNGA physics



http://laconga.redclara.net/wp-content/uploads/2020/07/preguntas-frecuentes-LACoNGA.pdf

Propuesta: basados en la información anterior



Algunos puntos para empezar la discusión

- Eje de teoría: debemos ajustar contenido actual de los syllabus propuestos
  - Introducción a la FT (común a ambas filiales): repasos necesarios (p.e. relatividad especial), lagrangianos con campos escalares, espinores y vectores, ecuación de Dirac y QED, dos ejemplos explícitos de SSB (superconductividad y mecanismo de Higgs)
  - Mecánica estadística (para SC) y fenomenología del modelo estándar (para HEP) necesitan revisión, ajustándose al número de ECTS disponibles
- Eje de instrumentación:
  - ¿Nivel del curso de introducción a la electrónica para físicos?
  - ¿Cómo ajustar el curso de física de detectores para generalizarlo hacia la filial de SC?
  - ¿Cuántas experiencias hands-on a realizar: una o dos? ¿Mantenemos a los estudiantes HEP y SC separados?
- Eje de ciencia de datos:
  - Ajustar el curso de MC y dinámica molecular a 4 ECTS (5 semanas efectivas). ¿Actividades hands-on previstas?