

Degree Programs in Pure and Applied Sciences, Graduate School of Science and Technology (Doctoral Programs)										Generic Competences					Specific Competences				
Course Category	Course Number	Course Name	Standard registration year	Credits			Course Methods			1	2	3	4	5	1	2	3	4	5
				Required	Core Electives	Free Electives	Lectures	Class Exercises	Practical training	Knowledge creation competence	Management competence	Communication competence	Leadership competence	Internationality competence	Theoretical design ability	Analytical ability for materials functionalities	Materials creation ability	Fundamental engineering ability	English negotiation ability
Degree Programs' Common Courses																			
Maj or Subjects	OBJ0001		1	1															
	OBJ0002		1	1															
	OBJ0003		1 - 3	2															
Doctoral Programs in Materials Innovation																			
Maj or Subjects	OBJRA31 OBJSA31	Research in M IIIA	1	3															
	OBJRA32 OBJSA32	Research in M IIIB	1	3															
	OBJRA41 OBJSA41	Research in M IVA	2	3															
	OBJRA42 OBJSA42	Research in M IVB	2	3															
	OBJRA51 OBJSA51	Research in M VA	3	3															
	OBJRA52 OBJSA52	Research in M VB	3	3															
	OBJRB01	Research Proposal	1	1															
	OBJRC31 OBJSC31	Open Seminar IIIA	1	1															
	OBJRC32 OBJSC32	Open Seminar IIIB	1	1															
	OBJRC41 OBJSC41	Open Seminar IVA	2	1															
	OBJRC42 OBJSC42	Open Seminar IVB	2	1															
	OBJRC51 OBJSC51	Open Seminar VA	3	1															
	OBJRC52 OBJSC52	Open Seminar VB	3	1															
	OBJRD31 OBJSD31	Joint Seminar IIIA	1		1														
	OBJRD32 OBJSD32	Joint Seminar IIIB	1		1														
	OBJRD41 OBJSD41	Joint Seminar IVA	2		1														
	OBJRD42 OBJSD42	Joint Seminar IVB	2		1														
	OBJRD51 OBJSD51	Joint Seminar VA	3		1														
OBJRD52 OBJSD52	Joint Seminar VB	3		1															

Required indicates required for each degree program