



**Faculty of Pharmacy
Tabriz University of Medical Sciences**

Ph.D Courses of Pharmaceutical Nanotechnology

Table A: Compensatory courses

Course code	Course name	Course credit		Number of hours	
		Theory	Practical	Theory	Practical
01	Principles of biopharmacy & pharmacokinetics	2	–	34	–
02	Pharmaceutics	2	–	34	–
03	Basic biochemistry	2	–	34	–
04	Immunology	2	–	34	–
05	Molecular & cellular biology	2	–	34	–
06	Organic chemistry	2	–	34	–
07	Physical pharmacy	2	–	34	–
Total credits	14				

Student will be asked to pass all or part of compensatory courses (Table 1). The composition of these courses will be determined by the department in which the student is admitted according to student's background.

Table B: Core courses

Course code	Course name	Course credits			Number of hours			Prerequisite
		Theory	Practical	Total	Theory	Practical	Total	
08	Molecular & cellular biology, Genetic	2	–	2	34	–	34	–
09	Nanobiology	2	–	2	34	–	34	08
10	Principle in nanophysics	1	–	1	17	–	17	–
11	Cell culture	1	0.5	1.5	34	17	51	08
12	Nanopharmaceutics	3	1	4	68	–	68	10
13	Biopharmacy & pharmacokinetics	2	–	2	34	–	34	–
14	Microscopic analysis of nanoparticles	1	1	2	34	–	34	–
15	Lecture 1 & 2	1	–	1	34	–	34	12
16	Advanced statistics	0.5	0.5	1	9	17	26	–
17	Bioinformatics	0.5	0.5	1	–	68	68	–
Total credits	18							
Thesis	20							
Total	38							

Table C: Non-core courses

Students should take 6 credits from total 30 credits brought bellow

Course code	Course name	Course credits		Number of hours (theory courses)	Prerequisite
		Theory	Practical		
18	Nanobiomarkers, nanobiosensors, nanobiomachines, nanobiokits	2	–	34	–
19	Advanced numeric calculation	2	–	34	–
20	Polymeric engineering	2	–	34	–
21	Nanotubes, nanocrystals, nanofilters	2	–	34	–
23	Tissue engineering	2	–	34	–
22	Gene delivery	2	–	34	–
24	Molecular immunology	0	2	34	–
25	Dynamics of biofluids	2	–	34	20
26	Advanced computing biology	2	–	34	–
27	Nanotoxicology	2	–	34	–
28	Nanobiochemistry & nanopharmacology	2	–	34	–
29	Nanomedicines & biobarriers	2	–	34	–
30	Radiopharmacy	2	–	34	–
31	Nanobiomaterials	2	–	34	–
32	Standardization of nano products	2			
Total credits		30			