Universidad Carlos III de Madrid

SUBJECT: LABORATORY OF GENETIC ENGINEERING AND CELL AND TISSUE BIONGINEERING		
MASTER DEGREE: MASTER IN BIOMEDICAL TECHNOLOGIES MANAGEMENT AND DEVELOPMENT	ECTS: 4	QUARTER: 2

TIMETABLE FOR THE SUBJECT

WEEK	SESSION	DESCRIPTION OF EACH SESSION	GROUP (X mark)		Indicate if a different lecture room is needed (computer, audiovisual, etc.)	HOMEWORK PER WEEK		
			1	2		DESCRIPTION	ATTENDING HOURS	HOMEWORK Max. 7H/WEEK
1	1	* Culture medium preparation * Cells (293-T) thawing , counting & seeding	X		Bioengineering Labs 1.0.G08		3	3
1	2	* $CaCl_2$ transfection into 293-T cells. Photo t=0. * HacaTs Thaw, count & seeding * Coat 6well plates with gelatin and keep them 4ºC O/N	X		Bioengineering Labs 1.0.G08		3	3
1	3	* Stop transfection * Starving for migration assay (Change of medium) * NECROPSY: Stem cell harvesting & Isolation	X		Bioengineering Labs 1.0.G08		3	3
1	4	* In vitro migration assay * MSCs Expansion: Change of medium * Count & cryopreserve 293-T cells	X		Bioengineering Labs 1.0.G08		3	5
1	5	* Evaluation of the migration assay: Photo of 2 types of wounds (Wide and narrow) * Exposition (Chapter19: Technical communications	X		Bioengineering Labs 1.0.G08		3	6
2	6	* Prepare decellularization solutions * Perform Muscle decellularization * MSCs Expansion: Change of Medium	X		Bioengineering Labs 1.0.G08		3	3

2	7	* Construct a perfusion BR * Kidney Isolation and BR mediated decellularization	**X**		Bioengineering Labs 1.0.G08		3	3
2	8	* Detach &count MSCs and thaw &count 293-T * Digestion solution preparation * Recelularization of the Kidney in a BR (+50ml of TB) * Skeletal muscle digestion	**X**		Bioengineering Labs 1.0.G08		3	3
2	9	* DNA extraction * Evaluation of Skeletal Muscle decelullarization protocol	**X**		Bioengineering Labs 1.0.G08		3	5
2	10	* Analysis of the results * DNA processing and reporting * Exposition of “troubleshooting”	**X**		Bioengineering Labs 1.0.G08		3	6
		Tutorials, handing in, assessments…						30
TOTAL HOURS							30	70