

BMC curriculum ősz félév							
Week	Date	lecture topic	Title	Lecturer	Seminar		
					covered topics	Teacher1	Teacher2
1	7-Sep	1.2	Introduction, requirements. (Briefly - Standards of length, mass, time. Significant figures. Prefixes. Conversion of units. OVI). Trigonometry, coordinate systems, radians, geometry, Vectors and scalars, directions	PF	Math review 1 finishing with functions and graphing	RI	PF
	10, Sept	3.4	Equation solving. Functions and graphing, exponents, scientific notation, logarithms, exponentials	HP			
2	14, Sept	5.6	Motion in one dimension, displacement, velocity, acceleration, motion diagrams. Freely falling objects.	SzGT	Math review 2 exponentials, logarithms + lect 5-6	KJ	PF
	17, Sept	7.8	Vectors and their properties. Components of vectors. Displacement, velocity and acceleration in two dimensions.	SzJ			
3	21, Sept	9.10	Motion in two dimensions. Projectile motion.	SzGT	lect 7-10	RI	BZs
	24, Sept	11.12	The laws of motion. Newton's First, Second and Third Law.	PF			
4	28, Sept	13-14	Applications of Newton's Laws. Forces of friction.	PF	lect 11-14	SzGT	HP
	1,Oct	15-16	Energy. Work. Kinetic energy and the work-energy theorem. Gravitational potential energy.	VZ			
	SCT 1 covering topics 1-10						
5	5-Oct	17-18	Spring potential energy. System and energy conservation. Power. Work done by varying forces.	BZs	lect 15-18	MB	PF
	8, Oct	19-20	Momentum and impulse. Conservation of momentum.Collisions. Elastic and inelastic collisions.	HP			
6	12, Oct	21-22	Angular speed and angular acceleration. Rotational motion under constant angular acceleration.	VZ	lect 19-22	SzJ	NE
	15, Oct	23-24	Centripetal acceleration. Newtonian gravitation. Kepler's laws.	SzgGT			
7	19, Oct	25-26	Torque and the two conditions for equilibrium. The center of gravity.	SZJ	lect 23-24	HP	MB
	22, Oct	27-28	Rotational kinetic energy. Angular momentum.	SZJ			
	SCT2 covering topics 11-22.						
8	26, Oct	29-30	States of matter. Deformation of solids. The Youngs's, shear and bulk modulus. Density and pressure. Variation of pressure with depth. Pressure measurements.	DBA	lect 25-28	KJ	NE
	29, Oct	31-32	Buoyant forces and Archimedes's principle. Fluids in motion. Equation of continuity and Bernoulli's equation.	PF			
9	2, Nov	33-34	Viscous fluid flow. Poiseuille's law, Circulation, blood pressure measurement, transport phenomena, diffusion, osmosis	PGy	lect 29-32	HP	DBA
	5, Nov	35-36	Temperature and the zeroth law of thermodynamics. Thermometers and temperature scales. Thermal expansion of solids and fluids. Macroscopic description of an ideal gas. The kinetic theory of gases.	PGy			
10	9, Nov	37-38	Energy in thermal processes. Heat and internal energy.	PGy	lect 33-36	BZs	SzJ
	12-Nov	39-40	Specific heat. Calorimetry. Latent heat and phase change.	PGy			
	SCT 3 topics 23-32.						
11	16, Nov	41-42	The first law of thermodynamics. The second law of thermodynamics. Entropy. Refrigerators and heat pumps.	ML	lect 37-40	SzGT	DBA
	19, Nov	43-44	Elastic potential energy. Hook's law. Simple harmonic motion. Motion of a pendulum.	ML			
12	23, Nov	45-46	Waves. Frequency, amplitude and wavelength. Interference of waves. Reflection of waves	ML	lect 41-44	BZs	DBA
	26, Nov	47-48	Sound. Energy and intensity of sound waves. Doppler effect	ML			
13	30, Nov	49-50	Ultrasound. Shock waves, standing waves. The ear and the principles of hearing.	NE	lect 45-48	KJ	VZ
	3, Dec	51-52	Overview and summary of all topics	PF			
	SCT4 covering topics 33-44.						
14	7, Dec	53-54	Interactive lectures and seminars and preparation for the ESE.	VZ		PF	SzGT
	10, Dec	55-56		VZ			
			Physics lecture: Monday, 12:00-14:00 (LC 0.14) Thursday, 9:00-11:00 (LC 0.14)				