PHYSICS & CHEMISTRY
BATXILERGOA 01

Topic	Sessions	# hrs
Atomic Theory and the Periodic Table	**01-17**	**17**
Dalton's atomic theory. Classification of matter	01-02	2
Rutherford's atomic theory. Atomic number, mass number. Isotopes	03-04	2
Bohr's atomic theory. The nature of light	05-07	3
Electron Configuration	08-09	2
The Periodic Table	10-11	2
Periodic Properties	12-14	3
Overview and Exam	15-17	3

Chemical Bonding	**18-25**	**8**
Overview. Ionic Bonding. Ionic Compounds and properties	18-19	2
Covalent bonding: introduction	20	1
Molecular Shape	21-22	2
Molecular polarity. Intermolecular Forces	23-24	2
Properties of Covalent Compounds	25	1

Nomenclature	**26-39**	**14**
Elements. Ions. Anions	26-28	3
Hydroxides. Binary Acids. Oxoacids	29-30	2
Exercises	31-32	2
Organic Nomenclature	33-36	4
Review	37-39	3

Chemical Calculations	**40-59**	**20**
The amount of matter in a sample	40	1
Gases	41-43	3
Solutions	44-48	5
Chemical Reactions: Balancing, Types of Reactions, Limiting Reactants, Exercises	49-59	11

Kinematics	**60-74**	**15**
Position, distance, displacement. Exercises	60-62	3
Velocity. Differentiation. Graphical Interpretations.	63-67	5
Motion with constant velocity	68-69	2
Acceleration. Free Fall	70-71	2
Projectile Motion. Exercises	72-73	2
Review	74	1

Dynamics	**75-91**	**17**
Newton's Laws	75-76	2
Atwood's Machine. Horizontal Plane. Exercises.	77-80	4
Inclined Plane. Exercises.	81-83	3
Circular Motion. Exercises.	84-85	2
Linear Momentum. Collisions. Impulse.	86-89	4
Review	90-91	2

Energy. Electricity	**92-108**	**16**
Mechanical Work	92	1
Work-Energy Theorem	93-94	2
Conservation of Mechanical Energy	95-97	3
Power	98	1
Exercises	99-102	3
Ohm's Law. Exercises.	103-108	6