

FOCUS FINAL – Biology Syllabus [David T]

Date	Syllabus
2/1	A1.1 Water / A1.2 Nucleic acids / B1.1 Carbohydrates and lipids/ B1.2 Proteins
2/8	A2.1 Origins of Cells / A2.2 Cell structure / A2.3 Viruses
2/15	B2.1 Membranes and membrane transport / B2.2 Organelles and compartmentalization / B2.3 Cell specialization
2/22	B3.1 Gas exchange / B3.2 Transport / B3.3 Muscle and motility
3/1	C3.1 Integration of body systems / C3.2 Defence against disease / C2.1 Chemical signalling / C2.2 Neural signalling
3/8	C1.1 Enzymes and metabolism / C1.2 Cell respiration / C1.3 Photosynthesis
3/15	A3.1 Diversity of 1rganism / A3.2 Classification and cladistics / B4.1 Adaptations to environment/ B4.2 Ecological niches
3/22	A4.1 Evolution and speciation / A4.2 Conservation of biodiversity / C4.1 Populations and communities / C4.2 Transfers of energy and matter
3/29	D4.1 Natural selection / D4.2 Stability and change / D4.3 Climate change
4/5	D1.1 DNA replication / D1.2 Protein synthesis / D1.3 Mutations and gene editing / D2.1 Cell and nuclear division
4/12	D2.2 Gene expression / D3.1 Reproduction / D3.2 Inheritance / D3.3 Homeostasis
4/19	Data Based Questions (Paper 1B)

FOCUS FINAL – Physics Syllabus		
Week	Syllabus	Teacher
2/1	A.1 Kinematics A.2 Forces and momentum	최승호
2/8	A.2 Forces and momentum A.3 Work, energy and power	최승호
2/15	A.4 Rigid body mechanics	최승호
2/22	B.1 Thermal energy transfers B.2 Greenhouse effect	조규연
3/1	B.3 Gas laws B.4 Thermodynamics	조규연
3/8	C.1 Simple harmonic motion C.2 Wave model C.3 Wave phenomena (~Refraction)	조규연
3/15	C.3 Wave phenomena (Interference~) C.4 Standing waves and resonance C.5 Doppler effect	조규연
3/22	D.1 Gravitational fields D.2 Electric and magnetic fields	최승호
3/29	B.5 Current and circuits D.2 Electric and magnetic fields	최승호
4/5	D.3 Motion in electromagnetic fields D.4 Induction	최승호
4/12	E.1 Structure of the atom E.2 Quantum physics E.3 Radioactive decay	조규연
4/19	E.4 Fission E.5 Fusion and stars A.5 Galilean and special relativity	조규연

FOCUS FINAL – Math AA Syllabus		
Date	Syllabus	Teacher
2/1	Exponential and Logarithm / Sequence and Series	조유상
2/7	Function 종합 2/8(토)이 아닌 2/7(금) 18:00~20:00에 진행합니다	조유상
2/15	Geometry	조유상
2/22	Trigonometry	모상현
3/1	Vector	모상현
3/8	Complex Number	모상현
3/15	Counting+Binomial Theorem	조유상
3/22	Probability Data(Sampling/Box and Whisker Diagram)	조유상
3/29	Stastics(Binomial Distribution/Normal Distribution)	조유상
4/5	Calculus(1) Limits / Differentiation	모상현
4/12	Calculus(2) Integration / Kinematics	모상현
4/19	Calculus(3) Maclaurin Series / Differential Equation	모상현

FOCUS FINAL – Chemistry Syllabus		
Date	Syllabus	Teacher
2/2	S1B Counting particles by mass and Ideal gases R2A Quantitative Chemistry (+Back titration) S1A The nuclear atom and electron configuration	최승호
2/9	S1A+ Mass spectra, emission spectrum S3A Periodicity and oxidation states S3A+ Ionization energy + transition metal properties	최승호
2/16	S2A Ionic, covalent and metallic model / Transition metal S2B VSEPR and Type of bonding S2B+ Resonance	최승호
2/23	S2C Allotrope and bonding triangle S2C++ Formal Charge and Expanded Octet S2C+++ Sigma/Pi bond and hybridization R1A Enthalpy and Hess's law R1A+ Standard enthalpy change	최승호
3/2	R1A++ Born Haber Cycle R1B Combustion and fuel R1C Entropy and Gibb's free energy	최승호
3/9	R2B Rate of reaction, collision theory and factors R2C Activation energy R2C+ Rate Equation and the Arrhenius equation/factor	최승호
3/16	R2D Dynamic equilibrium and Le Chatlier's principle R2D+ Reaction Quotient and Gibb's free energy	최승호
3/23	R3A Acid and Base Basics (Bronsted Lowry, pH, Ka) R3B Acid and Base Basics 2 (Strong and Strong calculation) R3B+ Acid and Base Advanced R3B++ Acid and Base Advanced 2 (Buffer and Indicator)	최승호
3/30	R3C Redox Basics (Half equation and Voltaic Cell) R3D Redox Basics 2 (Electrolysis and Standard Hydrogen Electrode) R3D+ Redox Advanced 1 (Electrolysis: Dilute and Concentrated) R3D++ Redox Advanced 2 (Electroplating, Stoichiometry in products) R3D+++ Redox Advanced 3 (Primary Cell, Secondary Cell, Fuel Cell)	최승호

4/6	<p>S3B Organic Compounds and functional group</p> <p>S3C Organic Compounds and functional group 2 (+polymerization and esterification)</p> <p>R3E Organic Chemistry Basics (Homolytic fission)</p>	이동민
4/13	<p>S3C+ Stereoisomer and optical isomer</p> <p>S3C++ Mass spectroscopy and IR</p> <p>S3C+++ HNMR (and Signal)</p>	이동민
4/20	<p>R3F Organic Chemistry Basics 2 (Heterolytic fission / SN)</p> <p>R3F+ Organic Chemistry Advanced 1 (Electrophilic Addition and Oxidation/Reduction of alcohol)</p> <p>R3F++ Organic Chemistry Advanced 2 (Electrophilic Substitution and property of benzene)</p>	이동민

FOCUS FINAL – Economics Syllabus SL [김희유 선생님]

Date	Syllabus
2/5	Microeconomics
2/12	A. Demand / B. Supply / C. Competitive market equilibrium D. Elasticities of demand / E. Elasticity of supply
2/19	Microeconomics
2/26	A. Role of government in microeconomics B. Market failure – Externalities C. Market failure – Public goods
3/5	Macroeconomics
3/12	A. Measuring economic activity and illustrating its variations B. Variations in economic activity – Aggregate demand and aggregate supply C. Macroeconomic objectives D. Economics of inequality and poverty
3/19	Macroeconomics
3/26	A. Demand management – Monetary policy B. Demand management – Fiscal policy C. Supply side policies
4/2	Global economy
4/9	A. Benefits of international trade B. Types of trade protection C. Arguments for and against trade control/ protection D. Economic integration E. Exchange rates F. Balance of payments
4/16	Global economy
4/23	A. Sustainable development / B. Measuring development C. Barriers to economic growth and/or economic development D. Economic growth and/or economic development strategies

FOCUS FINAL – Economics Syllabus HL [김희유 선생님]

Date	Syllabus
2/2	Microeconomics
2/9	A. Demand / B. Supply / C. Competitive market equilibrium D. Elasticities of demand / E. Elasticity of supply F. Critique of the maximizing behavior of consumers and producers
2/16	Microeconomics
2/23	A. Role of government in microeconomics B. Market failure – Externalities / C. Market failure – Public goods D. Market failure – (Asymmetric information, market power, equity)
3/2	Macroeconomics
3/9	A. Measuring economic activity and illustrating its variations B. Variations in economic activity – Aggregate demand and aggregate supply C. Macroeconomic objectives / D. Economics of inequality and poverty E. Sustainable level of government debt / Trade-off (unemployment & inflation)
3/16	Macroeconomics
3/23	A/B. Demand management (Monetary policy / Fiscal policy) C. Supply side policies D. Demand & Supply of money (equilibrium interest rates /Keynesian multiplier)
3/30	Global economy
4/6	A. Benefits of international trade / B. Types of trade protection C. Arguments for and against trade control/ protection D. Economic integration / E. Exchange rates / F. Balance of payments G. Absolute and comparative advantage / Tariffs, Quota, Subsidy/ export subsidy calculation / Relationship between the current account and the exchange rate / Marshall-Lerner condition and the J-curve effect
4/13	Global economy
4/20	A. Sustainable development / B. Measuring development C. Barriers to economic growth and/or economic development D. Economic growth and/or economic development strategies