IB Physics

Electrostatics and Field Theory - Chapter 16 & 17 Syllabus

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| Block | In Class: | Due on this class: | | If you miss this class: | |
| **1**  **Nov**  **6** | **GW**-Vector Forces (16.1)  **DI**-Conductors/Stupid Van de Graaff tricks | **VF 16A, 16B, 16D1, 16D2 (Forces)** | | **Watch Videos:**  **16A, 16B, 16 D1, 16 D2**  **Read:** 16.1-6 | |
| **2**  **Nov**  **8** | **GW**-Vector Fields (16.2, 16.1)  **DI**-Charging | **VF 16E, 16F, 16G1, 16G2 (Fields)** | | **Watch Videos:**  **16E, 16F, 16G1, 16G2**  **Read:** 16.7-8 | |
| **3**  **Nov**  **13** | **SA16.1 - Vector Force (First 30 minutes)**  **VF**-16H-Simple Voltage  **DI**-Potential and distance (16I) | Turn in FA 16.1 - Vector Forces | | **Watch Videos:**  **16H, 16I**  **Read:** 17.1-5 | |
| **4**  **Nov**  **15** | **GW**-Voltage (16.2, 17.1) | **VF 16K, 16L, 16M (Point voltages)** | | **Watch Videos:**  **16K, 16L, 16 M**  **Read:** 17.7-9 | |
| **5** Nov19 | **SA-16.2 - Vector Fields (First 30 minutes)**  **VF**-16J-Accelerated Ions  **DI**-Conservation of energy | Turn in FA16.2 - Vector Fields | | **Watch Videos:**  **16J, 16Q** | |
| **6**  **Nov**  **21** | **GW**-Conservation of energy (17.1) | **VF 16Q** | | **Watch Videos:**  **16Q** | |
| **7**  **Nov**  **27** | **SA17.1-Voltage (First 30 minutes)**  **VF**-16O-Capacitors  **DI**-RC Circuits | Turn in FA 17.1 - Energy | | **Watch Videos:**  **16O, 16P** | |
| **8**  **Nov**  **29** | **DI**-Millikan Prep  **DI**-EFM lab, RC lab | **VF-Millikan Prep parts 1, 2, 3**  Turn in Millikan Prep | | **Watch Millikan Prep Videos** | |
| **9**  **Dec**  **3** | Work on Labs/IA |  | |  | |
| **10**  **Dec**  **5** | **DI**-CRT Demo  Work on Labs/IA |  | |  | |
| **11**  **Dec**  **7** | Work on Labs/IA | **VF-16N CRT problems** | |  | |
| **12**  **Dec**  **11** | Work on Labs/IA | Turn in FA 17.2 - CRT | |  | |
| **1**  **Dec**  **13** | **GW**-Current, Voltage, Power | **VF 19A, 19B, 19C, 19D, 19E**  Turn in Electric Field Mapping (1), Millikan Oil Drop (4), and RC Circuits Labs (2) | | **Watch Videos:**  **19A, 19B, 19C, 19D, 19E** | |
| **2**  **Dec**  **17** | **GW**-Solving Series and Parallel circuits | **VF 19F, 19G** | | **Watch Videos:**  **19F, 19G** | |
| **3**  **Dec**  **19** | **SA-18.1 Currents (First 30 minutes)**  **VF**-19J Single Poppers  **GW**-Single Popper Networks | Turn in FA18.1 | |  | |
| **4**  **Dec**  **21** | **IA Show and tell day**  **Present your data graphs** |  | |  | |
| Assignments   * 4 Labs:   + Electric Field Mapping – mapping with voltmeters (individual) /30 pts   + Millikan Prep – take home practical analysis (individual) /30 pts   + Millikan Oil Drop Lab – simulation on the computer (groups of 4) /40 pts   + RC Circuits Lab - a capacitor discharging (groups of 2) /30 pts * 4 Formative/3 Summative Assessments:   + 16.1 – Coulomb’s law, electric field, net force   + 16.2 – Vector electric field   + 17.1 – Voltage due to point sources, work.   + 17.2 – CRTs and Capacitors (no summative) | | | Handouts | |