SLO_Physics_3YearPlan.xlsx

	F17		Sp18		F18		Sp19		F19		Sp20	
190	1	Riley Simpson Simpson	2	Tibbets Riley Murray	3	Riley Simpson Simpson	4	Riley Tibbets Stambach	5	Simpson Crockett x	6	Graves Crockett Stambach
200	1	Tibbets Tibbets Murray	2	Simpson Simpson Tibbets	3	Tartakovsky Chepin Murray	4	Simpson Simpson Hinton	5	Tibbets Stambach x	6	Simpson Graves x
210	1	Simpson x	2	Simpson x	3	Tibbets x	4	Simpson Simpson/Tibbets	5	Simpson x	6	Tibbets x
130	1,2	Rafferty			3,4	Stambach			5,6	Stambach		
131			1,2	Rafferty			3,4	Stambach			5,6	Stambach

190	1) Solve problems using a conceptual understanding of kinematics. 2) Solve problems using a conceptual understanding of dynamics with linear or rotational applications. 3) Apply energy and momentum techniques to analyze systems. 4) Understand the concepts of heat, thermodynamics and ideal gases and be able to use them in solving problems involving thermal equilibrium, heat transfer or heat engines. 5) LAB: Collect and analyze experimental data using graphical representation, including appropriate use of units and significant figures. 6) LAB: Relate the results of experimental data to the physical concepts discussed in the lecture portion of the class.

200	1) Integrate simple charge or current distributions to calculate electric or magnetic fields. 2) Analyze symmetric charge or current distributions to calculate electric or magnetic fields. 3) Analyze DC and AC circuits in terms of current, potential different or power dissipation for each element 4) Use the relevant Maxwell's equations to analyze and calculate electromagnetic induction. 5) LAB: Collect and analyze experimental data using graphical representation, including appropriate use of units and significant figures. 6) LAB: Relate the results of experimental data to the physical concepts discussed in the lecture portion of the class.

210	1) Analyze basic physical situations involving reflection and refraction, and use this analysis to predict the path of a light ray. 2) Analyze situations involving interference and diffraction of light waves, and apply these to situations including double slits, diffraction gratings, and wide slits. 3) Apply concepts from special relativity to analyze physical situations. 4) Apply basic concepts of quantum mechanics to analyze basic physical setups. 5) LAB: Collect and analyze experimental data using graphical representation, including appropriate use of units and significant figures. 6) LAB: Relate the results of experimental data to the physical concepts discussed in the lecture portion of the class.

130	1) Solve problems using a conceptual understanding of kinematics and dynamics with linear or rotational applications. 2) Apply knowledge of energy and momentum techniques to analyze systems. 3) Interpret and apply fundamental physics concepts such as simple harmonic motion, waves, gravitation, or material behavior. 4) Understand the concepts of heat, thermodynamics and ideal gases and be able to use them in solving problems involving thermal equilibrium, heat transfer and heat engines. 5) LAB: Collect and analyze experimental data using graphical representation, including appropriate use of units and significant figures. 6) LAB: Relate the results of experimental data to the physical concepts discussed in the lecture portion of the class.

131	1) Solve problems using a conceptual understanding of electric and magnetic fields. 2) Apply knowledge of potential and inductance to analyze systems AC and DC circuits. 3) Interpret and apply fundamental physics concepts such as electromagnetic waves, optics, and interference. 4) Understand the basics of modern physics concepts including special relativity, quantum mechanics, or nuclear physics. 5) LAB: Collect and analyze experimental data using graphical representation, including appropriate use of units and significant figures. 6) LAB: Relate the results of experimental data to the physical concepts discussed in the lecture portion of the class.

SLO_Physics_3YearPlan.xlsx

	F20	Sp21	F21	Sp22	F22	Sp23
190	1	2	3	4	5	6
200	1	2	3	4	5	6
210	1	2	3	4	5	6
130	1,2		3,4		5,6	
131		1,2		3,4		5,6

190

1) Solve problems using a conceptual understanding of kinematics.
2) Solve problems using a conceptual understanding of dynamics with linear or rotational applications.
3) Apply energy and momentum techniques to analyze systems.
4) Understand the concepts of heat, thermodynamics and ideal gases and be able to use them in solving problems involving thermal equilibrium, heat transfer or heat engines.
5) LAB: Collect and analyze experimental data using graphical representation, including appropriate use of units and significant figures.
6) LAB: Relate the results of experimental data to the physical concepts discussed in the lecture portion of the class.

200

1) Integrate simple charge or current distributions to calculate electric or magnetic fields.
2) Analyze symmetric charge or current distributions to calculate electric or magnetic fields.
3) Analyze DC and AC circuits in terms of current, potential different or power dissipation for each element
4) Use the relevant Maxwell's equations to analyze and calculate electromagnetic induction.
5) LAB: Collect and analyze experimental data using graphical representation, including appropriate use of units and significant figures.
6) LAB: Relate the results of experimental data to the physical concepts discussed in the lecture portion of the class.

210

1) Analyze basic physical situations involving reflection and refraction, and use this analysis to predict the path of a light ray.
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3) Apply concepts from special relativity to analyze physical situations.
4) Apply basic concepts of quantum mechanics to analyze basic physical setups.
5) LAB: Collect and analyze experimental data using graphical representation, including appropriate use of units and significant figures.
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130

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