	F20		Sp21		F21		Sp22		F22		S23		F23		Sp24		F24		Sp25	
201	1	Stambach Crockett	2	Graves Crockett	201 1,2,3	Simpson Lambert	201	Graves Graves	201 1,2,3	Simpson Simpson Fedrow	1	Graves Graves Simpson	1,2,3		1,2,3		1,2,3		1,2,3	
202	1	Graves Tibbets	2	Tibbets Olim	3	Graves Crockett x	202 1,2,3	Simpson Lambert	202 1,2,3	Graves Lambert	202 1,2,3	Simpson Simpson Simpson	1,2,3		1,2,3		1,2,3		1,2,3	
203	1	Simpson	2	Tibbets	3	Tibbets	4	Fedrow	203		1,2,3	Fedrow	1,2,3		1,2,3		1,2,3		1,2,3	
130	1,2	Stambach			3,4	Stambach			1,2	Stambach	3,4	Stambach	1,2		3,4		1,2		3,4	
131			1,2	Stambach			3,4	Stambach	1,2	Stambach	3,4	Stambach	1,2		3,4		1,2		3,4	
110									1,2	Crockett	1,2	Crockett	1,2		1,2		1,2		1,2	

201
1. Apply conservation of energy to estimate solutions to real world problems.
2. Use Newton's Second Law to analyze the forces acting on a system in order to obtain information about its motion (position, speed, acceleration).
3. LAB - Demonstrate good measurement techniques using basic lab equipment such as rulers, scales, or sensors.

202
1. Use the laws of thermodynamics and/or Maxwell's Equations to organize and solve multi-concept physics problems.
2. Organize and communicate concepts or applications of electromagnetism or thermodynamics using words, mathematical equations, and other visualization tools (ex: tables, graphs, pictures, animations, diagrams).
3. LAB - Use the scientific method to design controlled experiments and analyze data including statistical and uncertainty analysis; distinguishing between models; and presenting those results with appropriate tables and charts.

203
1. Use optics, relativistic, or quantum models to organize and solve multi-concept physics problems.
2. Teach a modern physics optics concept or application to others using words, mathematical equations, and other visualization tools (ex: tables, graphs, pictures, animations, diagrams).
3. LAB - Use the scientific method to design controlled experiments and analyze data including statistical and uncertainty analysis; distinguishing between models; and presenting those results with appropriate tables and charts.

130 new
1. Evaluate biological systems and medical technologies in order to articulate how physical concepts like motion, force, energy, and fluid dynamics govern their function and operation.
2. Apply the principle of conservation of energy to systems acted upon by conservative gravitational forces in order to obtain information about velocity or position.
3. Use Newton's Second Law to analyze the forces acting on a system in order to obtain information about its motion (position, speed, acceleration).
4. Graph quantitative data gathered from biological systems in order to draw scientific conclusions and predict mathematical relationships between variables.

131 new
1. Evaluate biological systems and medical technologies in order to articulate how physical concepts like electric force, magnetism, and radioactive decay govern their function and operation.
2. Apply the principle of conservation of energy to systems acted upon by conservative electromagnetic forces in order to obtain information about the velocity and position of charged particles.
3. Apply the principles of ray optics to explore technologies such as corrective lenses, microscopes, and telescopes.
4. Use the scientific method to design controlled experiments and analyze data using graphs and trendlines.

110
1. Apply the concept of energy conservation to solve real world problems.
2. Demonstrate ability to use scientific data in order to make informed decisions regarding public policy.

OLD

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.