PHSX - Physics

PHSX 205. College Physics I 4 Credits. (3 Lec, 1 Lab) F,S,Su
PREREQUISITE: High school trigonometry or M 121Q or (Math Level 4 or Higher). First semester of sequence. Topics include kinematics and dynamics of linear and rotational motion; work and energy; impulse and momentum; and fluids. Students will not receive credit if they have passed PHSX 220 or PHSX 240. Common exams.

Term CRN Section Session/Dates Days Location Time
2019 Summer 10264 001 May-start: 4x4 MTWR BARNAR103 9:00am - 9:50am 11:00am - 11:50am
2019 Summer 10264 001 May-start: 4x4 MTWR BARNAR103 11:00am - 11:50am
2019 Summer 10264 001 May-start: 4x4 MTWR BARNAR103 1:10pm - 2:00pm
2019 Summer 10265 002 May-start: 4x4 MTWR AJMJH137 2:10pm - 4:00pm
2019 Summer 10266 003 May-start: 4x4 MTWR AJMJH137 4:10pm - 6:00pm
2019 Summer 10418 004 May-start: 4x4 MTWR AJMJH137 6:10pm - 8:00pm

PHSX 207. College Physics II 4 Credits. (3 Lec, 1 Lab) F,S,Su
PREREQUISITE: PHSX 205 or PHSX 220 or PHSX 240. Second semester of sequence. Topics include simple harmonic motion; electric forces and fields; dc electric circuits; magnetic forces and fields; and magnetic induction and motors. Students will not receive credit if they have passed PHSX 222 or PHSX 242. Common exams.

Term CRN Section Session/Dates Days Location Time
2019 Summer 11118 004 June-start: 4x4 - - -
2019 Summer 10267 001 June-start: 4x4 MTWR BARNAR103 12:00pm - 12:50pm
2019 Summer 10267 001 June-start: 4x4 MTWR BARNAR103 2:00pm - 2:50pm
2019 Summer 10268 002 June-start: 4x4 MTWR AJMJH137 6:10pm - 8:00pm
2019 Summer 10434 003 June-start: 4x4 MTWR AJMJH318 6:10pm - 8:00pm

PHSX 220. Physics I with Calculus 4 Credits. (3 Lec, 1 Lab) F,S,Su
COREQUISITE: M 171Q or M 181Q. First semester of a three-semester sequence primarily for engineering and physical science students. Covers topics in mechanics (such as motion, Newton's laws, conservation laws, work, energy, systems of particles, and rotational motion) and in mechanical waves (such as oscillations, wave motion, sound, and superposition). Common exams.

Term CRN Section Session/Dates Days Location Time
2019 Summer 11116 004 May-start: 4x4 MTWR AJMJH318 6:10pm - 8:00pm
2019 Summer 10777 001 May-start: 4x4 MTWR BARNAR108 8:30am - 10:00am
2019 Summer 10777 001 May-start: 4x4 MTWR BARNAR108 3:00pm - 4:30pm
2019 Summer 10778 002 May-start: 4x4 MTWR AJMJH318 10:10am - 12:00pm

PHSX 222. Physics II with Calculus, 4 Credits. (3 Lec, 1 Lab) F,S,Su
PREREQUISITE: PHSX 220 or PHSX 240; M 171Q or M 181Q. COREQUISITE: M 172Q or M 182Q. Covers topics in electricity and magnetism (such as Coulomb's law, Gauss' law, electric fields, electric potential, dc circuits, magnetic fields, Faraday's law, ac circuits, and Maxwell's equations) and optics (such as light, geometrical optics, and physical optics). Common exams.

Term CRN Section Session/Dates Days Location Time
2019 Summer 11117 004 June-start: 4x4 MTWR AJMJH146 6:10pm - 8:00pm
2019 Summer 10779 001 June-start: 4x4 MTWR BARNAR108 8:30am - 10:00am
2019 Summer 10779 001 June-start: 4x4 MTWR BARNAR108 3:00pm - 4:30pm
2019 Summer 10780 002 June-start: 4x4 MTWR AJMJH146 10:10am - 12:00pm
2019 Summer 10781 003 June-start: 4x4 MTWR AJMJH146 12:10pm - 2:00pm

PHSX 224. Physics III, 4 Credits. (3 Lec, 1 Lab) F,S,Su
PREREQUISITE: PHSX 222 or PHSX 242; M 172Q or M 182Q. Covers topics in thermodynamics (such as temperature, heat, laws of thermodynamics, and the kinetic theory of gases) and modern physics (such as relativity; models of the atom; quantum mechanics; and atomic, molecular, solid state, nuclear, and particle physics).

Term CRN Section Session/Dates Days Location Time
2019 Summer 11047 003 July-start: 4x4 MTWR AJMJH137 12:10pm - 2:00pm
2019 Summer 10782 001 July-start: 4x4 MTWR ROBERT113 8:30am - 10:00am
2019 Summer 10782 001 July-start: 4x4 MTWR ROBERT113 3:00pm - 4:30pm
2019 Summer 10783 002 July-start: 4x4 MTWR AJMJH137 10:10am - 12:00pm

PHSX 401. Physics by Inquiry I, 3 Credits. (3 Lab) Su
PREREQUISITE: Teacher Certification. An in-depth and hands-on exploration of basic physics principles. Scientific model building and proportional reasoning skills will be developed in the context of dc electrics, one and two dimensional kinematics, and dynamics. For middle school and high school science teachers.

Term CRN Section Session/Dates Days Location Time
2019 Summer 10905 001 Non-standard term dates MTWR AJMJH317 8:00am - 5:00pm

PHSX 402. Physics by Inquiry II, 3 Credits. (3 Lab) Su
PREREQUISITE: PHSX 401. An in-depth and hands-on exploration of basic physics principles. Scientific model building and proportional reasoning skills will be developed in the context of light, color, geometrical optics, heat, and temperature. For middle school and high school teachers.

Term CRN Section Session/Dates Days Location Time
2019 Summer 11316 001 Non-standard term dates MTWR AJMJH 8:00am - 5:00pm

PHSX 491. Special Topics, 1-4 Credits. (1-4 Lec; 12 cr max) On Demand Max 12 cr. PREREQUISITE: Course prerequisites as determined for each offering. Courses not required in any curriculum for which there is a particular one-time need, or given on a trial basis to determine acceptability and demand before requesting a regular course number.

Term CRN Section Session/Dates Days Location Time
2019 Summer 10262 001 Intersession - - -
PHSX 511. Astronomy for Teachers. 3 Credits. (3 Rct) F,S,Su
PREREQUISITE: Graduate standing; Currently certified middle and high school teachers with one year of teaching experience. This is an online, distance education course primarily intended for science educators. Topics include: the laws of gravity and orbital dynamics, a survey of the solar system, stars and stellar evolution, galaxies, and Big Bang cosmology.

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<tr>
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<td>2019 Summer</td>
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<td>Non-standard</td>
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<td>ONLINEWEB-</td>
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PHSX 513. Quantum Mechanics Online. 3 Credits. (3 Lec) Su alternate years, to be offered even years.
PREREQUISITE: Graduate standing. Currently certified high school teachers with one year of teaching experience; an introductory course in quantum mechanics or an equivalent course in modern physics. The course examines the fundamental principles of quantum mechanics and their applications.

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PHSX 571. Electric Circuits and Magnetism for Teachers. 2 Credits. (2 Lec) Su
PREREQUISITE: Graduate standing; science educator; interest in science. This 2-credit graduate course is designed for practicing teachers who are teaching or planning to teach electricity and magnetism in their classrooms. The course examines the fundamental principles of electricity and magnetism and their applications.

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PHSX 574. World of Motion for Teachers. 1 Credit. (1 Lec) Su
PREREQUISITE: Graduate standing; science educator; interest in science. This 1-credit course is designed for practicing teachers who are teaching or planning to teach kinematics and dynamics in their classrooms. The course examines the fundamental principles of motion and its applications.

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<td>ONLINEWEB-</td>
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PHSX 576. World of Force for Teachers. 1 Credit. (1 Lec) Su
PREREQUISITE: Graduate standing; science educator; interest in science. This 1-credit course is designed for practicing teachers who are teaching or planning to teach kinematics and dynamics in their classrooms. The course examines the fundamental principles of motion and its applications.

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</table>

PHSX 591. Special Topics. 1-4 Credits. (1 Lec; 12 cr max) On Demand
Max 12 cr. PREREQUISITE: Upper division courses and others as determined for each offering. Courses not required in any curriculum for which there is a particular one time need, or given on a trial basis to determine acceptability and demand before requesting a regular course number.

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<tr>
<th>Term</th>
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<th>Session/Dates</th>
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<tr>
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PHSX 594. Seminar. 1 Credit. (1 Sem; 8 cr max) On Demand
Max 8 cr. PREREQUISITE: Graduate standing or seniors by petition. Course prerequisites as determined for each offering. Topics offered at the graduate level which are not covered in regular courses. Students participate in preparing and presenting discussion material.

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<tr>
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<td>May-start: 4x4</td>
<td>-</td>
<td>BARNAR258 -</td>
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PHSX 595. Teaching Mechanics Using Research-based Curriculum. 2 Credits. (1 Lec. 1 Lab) Su
PREREQUISITES: Teacher of science with a minimum of two years teaching experience. This course prepares participants to teach a mechanics course built around Tutorials in Introductory Physics (McDermott, et al.). This research-based curriculum was designed to be used in recitations to augment traditional lecture courses operating essentially independent of the lecture. The course will model both the student-centered tutorial instruction and the supporting active-engagement lectures for a selection of topics from the first semester of the two-semester sequence.

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PHSX 596. Teaching Electricity & Magnetism for Teachers. 2 Credits. (1 Lec. 1 Lab) Su
PREREQUISITE: Teacher of science with a minimum of two years teaching experience. This course prepares participants to teach an integrated course built around Tutorials in Introductory Physics (McDermott, et al.). This research-based curriculum was designed to be used in recitations to augment traditional lecture courses operating essentially independent of the lecture. The course will model both the student-centered tutorial instruction and the supporting active-engagement PowerPoint lectures. We will also review the physics education research literature that provides the foundation for these curricular materials.

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<td>MTWRF AJMH147 9:00am - 5:00pm</td>
<td>JUN-19 28- JUN-19</td>
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</tbody>
</table>
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.