

## Transfer Equivalency Credit for UVA Physics Courses

If you take a course at another college or university that is sufficiently similar to a course at UVA, you can receive equivalence credit for the corresponding UVA course. In that case, the transfer course will satisfy any university requirements just like the UVA course would. It is the responsibility of the physics department to evaluate equivalencies for transfer credit courses in physics. We consider courses to be equivalent if they cover substantially the same topics at substantially the same level.

Note that a pre-health curriculum is **not** a requirement; there is no need to obtain equivalence credit for pre-health preparation courses, and doing so will have no impact your admission chances for a graduate or professional school. Equivalency is needed only when the course is required for your program (i.e., engineering) or major (i.e., biology).

For lecture courses, equivalency can generally be evaluated based on a detailed course syllabus that includes a topic schedule. For reference, the major topics for our introductory courses are summarized below. A transfer course that omits any of the listed topics will not qualify for equivalency:

### **PHYS 2010 - Principles of Physics 1 for Pre-Health Students** (algebra-based)

Kinematics	Gravitation
Newton's Laws	Oscillations and waves
Energy	Fluids
Momentum	Thermodynamics
Rotations	

### **PHYS 2020 - Principles of Physics 2 for Pre-Health Students** (algebra-based)

Electric charge, field, and potential	Electromagnetic waves
Resistors and capacitors	Optics
Magnetic fields	Relativity and quantum physics
Magnetic induction and ac circuits	Atomic and nuclear physics

### **PHYS 1425 - Introductory Physics 1 for Engineers** (calculus-based)

Kinematics	Gravitation
Newton's Laws	Oscillations and waves
Energy	Fluids
Momentum	Thermodynamics
Rotations	

### **PHYS 2415 - Introductory Physics 2 for Engineers** (calculus-based)

Electric charge, field, and potential	Magnetic induction and ac circuits
Resistors and capacitors	Electromagnetic waves
Magnetic fields	Optics

Online lecture courses can be considered for equivalency.

Laboratory courses are less likely to be equivalent to a UVA course, since the design of lab courses often varies considerably between institutions. To evaluate a lab course, we require both:

- a detailed syllabus with all labs listed, and
- sample lab manuals or instructions for at least two of the labs.

Typically, it will be necessary to contact the course instructor to obtain the sample manuals; give yourself enough time to obtain these materials when you are considering transfer options.

The UVA courses PHYS 1429 and 2030 are introductory labs associated with PHYS 1425 and 2010, while PHYS 2419 and 2040 are associated with PHYS 2415 and 2020, respectively. At this time, PHYS 1429 and 2030 are effectively equivalent, as are PHYS 2419 and 2040; you can request equivalency credit for whichever course you require.

To obtain equivalency credit, the transfer lab course should cover topics parallel to the corresponding lecture class. In addition, the lab course must include:

- At least 20 hours of in-person lab work involving non-simulated data
- An introduction to and practice with uncertainties and error analysis
- Practice in preparing lab reports, including reports on multiple topics totaling to at least five pages of written work

During the COVID era, the restriction to in-person labs was relaxed and online labs were permitted. As of Fall 2022, an in-person lab experience is again required. If you have extraordinary circumstance that requires additional accommodation, contact the physics department to discuss your needs.