

Representative Equipment used by Davidson College Science Departments

Biology

Centrifuges – Ultracentrifuge, standard centrifuges, refrigerated centrifuge, microcentrifuges and countertop centrifuges
Metler microbalance and many other balances
Spectrophotometers (varied and numerous)
Autoclave units
Protein and nucleic acid electrophoresis equipment
Microplate readers
DNA microarray reader system
DNA microarray printing robot
Automated DNA sequencing system
DNA and RNA hybridization systems
Immunoblot apparatus
Gel and blot imaging system
PCR equipment
Computational genomics lab with stereographic viewing (3-D) capabilities
Confocal microscope
Epifluorescence microscopes with an image analysis system
Inverted and phase contrast microscopes
Matic Dual Head Stereoscopes with fiberoptic illuminators and digital cameras
Picospritzer, micromanipulators and pipette puller
Microinjection setup for constructing transgenic flies
CCD cameras with microscopes
MACLAB4 physiology systems
Global positioning system
Geographical information systems
Radio Telemetry equipment
Digital camcorders and cameras

Chemistry

Varian Saturn 2000 gas chromatograph-mass spectrometer
JEOL 400 MHz FT-NMR spectrometer
Midac M Series FT-IR spectrometer
Varian 20 Plus atomic absorption spectrometer
Cary 300 Bio UV-Vis spectrophotometers
Jasco J-715 circular dichroism spectrophotometer
Perkin-Elmer 650-10 and 650-40 and Jobin Yvon Fluoromax-3 fluorescence spectrophotometers
Varian CP-3800 capillary gas chromatograph
Dionex DX-100 ion chromatograph and Summit high performance liquid chromatograph
BAS 100 electroanalytical system
PRA time-correlated single photon counting spectrophotometer

Physics

diode-pumped Nd:YAG laser coupled to a Ti-sapphire ring cavity

two pulsed Nd:YAG dye laser systems

CO₂ laser system

1.3-m scanning monochromator

Fourier transform infrared spectrometer

differential scanning calorimeter

wavemeters and spectrum analyzers

transient capacitance spectroscopy system

liquid helium and nitrogen cryostats

Penning ion trap

2-Tesla electromagnet

Lock-in amplifiers

optical tweezers

diode lasers

Psychology

operant conditioning boxes (a.k.a. Skinner boxes) [connected to PCs that control the reinforcement schedule]

microtome (for slicing rat brains)

freezers and refrigerators [for storing rat brains, drugs, chemicals]

stereotaxis (device that holds rats steady on the operating table)

microscopes

animal mazes (Y-maze; 8-arm radial maze)

remote control cameras to tape human interaction in lab rooms

physiological monitoring equipment (records heart rate, blood pressure, etc.)