

STEM
2014-15 Equipment Requests

Item	Qty	Total Cost	Replacement or Expansion
Astronomy			
11-inch Celestron telescopes with HD optics, wedges, eyepieces, dew shields and planetary cameras for use in the observing classes.	10	\$50,000	replacement
High speed digital cameras for planetary imaging using C-11 student telescopes	10	\$2000	expansion
Large format, wide field deep sky imaging digital cameras for use with the student telescopes	10	\$20,000	expansion
Chemistry			
Spectronic 20 Visible spectrophotometers,	7	\$21,000	supplement
VWR Hot plate Stirrers, 7x7	10	\$5,000	replacement
gel electrophoresis system and power supply, share with Biology http://www.invitrogen.com/site/us/en/home/Products-and-Services/Applications/Protein-Expression-and-Analysis/Protein-Gel-Electrophoresis.html?s_kwcid=TC 12126 gel%20electrophoresis%20apparatus S p 9374729281	15	\$20,000	expansion
Diode array UV-VIS spectrophotometer http://www.chem.agilent.com/en-US/Products/instruments.molecularspectroscopy.uv-vis/systems/cary300/pages/default.aspx	3	\$25,000	expansion
Earth Science			
Ryobi Non-Contact Infrared Thermometers	20	\$600	expansion
Illuminated globe	1	\$3000	supplement
Purchase two wall maps with rollers	2	\$2500	replacement
Geography, Geology, meteorology and oceanography equipment for use as classroom demonstrations and display case educational aids. This equipment would include earth models, posters of products from the earth, digital meteorological apparatuses, groundwater models, El Nino demonstrations, and other display equipment.	xxx	\$2000	expansion
Life Science			
Biopac Acquisition units, electrode lead sensors, respiratory lead sensors (Physiology)	20 units	\$50,000	replacement
UV transilluminator (Biology 101/102)	1	\$2000	supplement
gel electrophoresis system & power supply, share with	15	\$20,000	expansion

Chemistry http://www.invitrogen.com/site/us/en/home/Products-and-Services/Applications/Protein-Expression-and-Analysis/Protein-Gel-Electrophoresis.html?s_kwcid=TC 12126 gel%20electrophoresis%20apparatus S p 9374729281			
anatomy models, assorted models of human anatomical parts	xxx	\$400-\$60,000	New and replacement
36 new compound microscopes (Labomed CxL) are required for NATS 127 and a total of 72 stereoscopes (Labomed CZM6) are needed for both NATS 127 and 129. Each classroom (Nats 123 and LS109) needs the following: 36 Labomed CZM6 Stereo Zoom Microscope 36 2.0X auxiliary objective and riser block new compound microscopes with 4x, 10x, 40x objectives 36 Labomed binocular compound microscope		\$140,000	Replacement
constant temperature water baths,	1	\$1500	supplement
Physics			
Millikan Oil drop apparatus	1	\$6500	expansion
Large capacitor	1	\$400	supplement
New tools for the physics machine shop, to include a circular saw, power drill, miter saw, band saw and small welding set.		\$1000	expansion
x-ray diffraction demo using microwaves	1	\$1600	expansion
Machine Tool Technology			
CNC Water Jet with 3' x 5' table (25 yr old system)	1	\$45,000	replacement
CNC Wire EDM 4 axis (26 year old system)	1	\$60,000	replacement
HP50 Motoman robot arm (Robotic material removal)	1	\$60,000	expansion
Haas CNC office lathe (current lathe obsolete)	1	\$40,000	replacement
Fanuc LR mate Cert cart (further expansion into Robot programming education)	1	\$35,000	Expansion/ supplement

Expansion – we do not currently have this equipment

Replacement – the current equipment is in need of replacement or repair

Supplement – we currently have these items, but need additional items to improve efficiency.

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3/14/14