



Republic of the Philippines
CAVITE STATE UNIVERSITY
 Don Severino de las Alas Campus
 Indang, Cavite
www.cvsu.edu.ph

**SUPPLY, DELIVERY AND INSTALLATION OF VARIOUS LABORATORY
 EQUIPMENT FOR THE UNIVERSITY**

₱5,365,601.00 / F101

Item No.	Unit	Specifications	Unit Price	Total Price
1	2 Units	<p>Stereomicroscope (BRITE)</p> <ul style="list-style-type: none"> - Heads: Trinocular 360° rotating and 45° inclined - Interpupillary distance: Adjustable between 51 and 75 mm - Dioptic compensation: On both eyepiece tubes (trino). - Eyepiece: EWF10x/20 mm (high point) for people wearing spectacles. - Objectives: Parfocal achromatic zoom 0,7x...4,5x (6,428:1 zoom factor) - Specimen stage: Models with illumination are fitted with a black/white disc for contrast specimen clamps and a frosted glass disc for transmitted light. - Focusing: By means of a rack and pinion controlled by a pair of knobs placed on both sides. - Illumination: Double adjustable illuminator for incident and transmitted light fitted with two 12V/15W halogen bulbs. 230V/50Hz power supply. <p><i>Technical Specifications:</i></p> <ul style="list-style-type: none"> - Head: Trinoculars - Eyepiece: WF 10x/20mm - Objectives: 0,7x...4,5x zoom - Working Distance: 100 mm Pillar stand, low profile base - Stand Illumination: Incident: high power X-LED3; - Transmitted: 40mm LED diffusing disc 	60,000.00	120,000.00
2	2 Units	<p>Trinocular Compound Light Microscope (BRITE)</p> <ul style="list-style-type: none"> - Head: Trinocular (split ration:5/50), 30° inclined; 360° rotating - Dioptic adjustment: both eyepiece - Eyepieces: FW10x/18 mm, high eyepoint, secured by screw - Nosepiece: Quadruple ball bearings revolving nosepiece, reversed <p>Objectives:</p> <ul style="list-style-type: none"> - N-PLAN objective 4x/0.10 - N-PLAN objective 10x/0.25 - N-PLAN objective 40x/0.65 - N-PLAN objective 100x/1.25 (Oil/Water) <p>All with anti-fungus treatment</p>	65,000.00	130,000.00

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		<ul style="list-style-type: none"> - Specimen Stage: Mechanical stage, 125x115 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, - Accuracy:0.1 mm - Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob. - Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm - Illumination: X-LED² with white 3 W LED and brightness control. - Color Temperature: 6,300 K. Multi-plug 100 240Vac/6Vdc external power supply 		
3	1 Units	<p>Rotary Evaporator (BRITE)</p> <ul style="list-style-type: none"> - Rotary Bottle: 1L 24# (Standard Size) - Collecting Bottle: 1L 35# (Ball Mill Mouth) - Condenser: Vertical $\Phi 85 \times 430$mm, - Charging Valve: 19# (Standard Size) - Rotating Speed: 0~180 Rpm - Vacuum: -0.098 MPa - Temp. Range: Rt~99°C - Temp. Accuracy: $\pm 1^\circ\text{C}$ - Stroke Height: 120 mm - Rotating Power: 40W - Heating Power: 1.5kw - Shelf Material: Aluminum Alloy - Power Supply: AC220V$\pm 10\%$, 50Hz - External Size (W*D*H): 660*420*830mm - With Evaporation Flask (Round-Bottom Flask, Receiving Flask, Cold Trap Flask and Oil-Based Vacuum Pump 	284,300.00	284,300.00
4	2 Units	<p>Analytical Balance (CAS)</p> <ul style="list-style-type: none"> - Capacity: at least 400 g - Readability: 1mg - Resolution: 0.1 mg - Pan diameter: approx. $\Phi 80$mm - Repeatability: 0.1 mg - Linearity: ± 0.3 mg - Response time: ≤ 4 sec - Power supply: 110-230 Vac, 50/60Hz - Power output: 24V 500mA 13VA - With compatible AVR - With calibration certificate - Work Space Height: 240mm 	170,000.00	340,000.00
5	2 Units	<p>2L Lab Rotary Evaporator Evaporation Apparatus with Motor Lift (CAS)</p> <ul style="list-style-type: none"> - Design Temperature [$^\circ\text{C}$]: - Water bath: RT-99°C; - Oil bath: RT-180°C; $\pm 0.2^\circ\text{C}$ - Working Pressure [pa]: <399Pa [3mmHg] 	130,000.00	260,000.00

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		<ul style="list-style-type: none"> - Ambient Temperature [°C]: 5-35°C - Ambient Relative humidity: ≤65% - Stirring Speed [rpm]: 10-200 - Rotary Flask Volume [L]: 2 - Sealing: PTFE - Flask Diameter [mm]: 24 I Standard - Collecting Volume [L]: 1-2 - Condenser Interface with Flask: 35 I Ball joint - Condensation Area [m²]: 0.17 		
6	1 Units	<p>Muffle Furnace (CAS)</p> <ul style="list-style-type: none"> - Continuous usable temp. range: 100°C~1100°C - Inside Volume 4.5L-5L -Adjustable Thermostat -Inside dimension mm (Approximate): 200(W)x150(D)x150(H) - Weight: approximately 33kg - Temperature controller: Digital - Programmable Controller: (5 patterns 18 segment) - Timer: 99hr 59min (Programmable). 4 Side Heating. - Power consumption: 1400W. - Power: 220V - Safety Device: Over Temp. and Over Current Protector, Sensor Error Detector 	186,000.00	186,000.00
7	1 Units	<p>Inverted Microscope (MACAPUNO)</p> <ul style="list-style-type: none"> - Long-life LED illumination - Wide and clear view trinocular - Applicable for live cell imaging in petri plates and micro plates or cell cultures - With 4-fold magnification: 2x, 10x, 20x, 40x magnification - Interference contrast - Mechanical stage with stage extension plate - Hemacytometer holder - Universal holder - Eye piece micrometer cross lines on X and Y - Stage micrometer for biological microscope - With pointer - Dust cover - Power cord - With digital camera and computer interface - Suitable for fluorescent observation - Two years warranty on parts and services 	450,000.00	450,000.00
8	1 Units	<p>Refrigerated Centrifuge (CVMB5)</p> <ul style="list-style-type: none"> - Tabletop Refrigerated centrifuge - Max speed: 15,300 rpm - Max RCF: 22,250 xg - Maximum capacity: 2,000 mL - Temperature setting: -10 to 40°C in 1°C increments - Cools up to 4°C in less than 10 minutes - Has rotors for 0.2, 1.5 and 2.0 ml tubes - Size: 70(W)x 63(D)x36(H) cm 	700,000.00	700,000.00

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		<ul style="list-style-type: none"> - Height with opened lid: 88.3 cm* - Weight: 83 kg to 87 kg - Power consumption and Head output: 710W, 2.6MJ/h - About 9W (power consumption in power saving mode) - Power requirements: single phase 220 ± 10% V 50/60Hz, 10A - Single phase 230 ± 10 % V 50/60Hz, 10A - Rated voltage and rated current: 220 V, 50/60 Hz: 3.8A, 230 V, 50/60Hz: 3.7A - Test standard: IEC61010-2-020 - Control system: Inverter Microprocessor control, Rotation speed, RCF, Time, acceleration/deceleration, Number of memories: 99 channels at the maximum (3 for direct invocation using the panel button) - Error and user message display: Lid open, Imbalance, Over speed, Motor, Speed sensor, temperature sensor, Lid rock, inverter, Abnormal temperature, Imbalance sensor <ul style="list-style-type: none"> - Two years warranty 		
9	2 Units	<p>UV Cleaner Box for PCR (CVMBS)</p> <ul style="list-style-type: none"> - Tabletop - Walls material Rear: stainless steel, - Sides: steel with chemical resistant powder coating - Front: glass (Euro glass) - Working surface material: Stainless steel - Open UV-lamp: 1 x 25W built-in bactericidal UV-C, TUV 25W 1SL/25 - Working surface: chemical resistant stainless steel - With bactericidal UV Lamp and UV recirculatory, digitally timed with 1 min increments - UV radiation level: 18 mW / cm² / sec - Radiation type: UV (λ = 253.7 nm), ozone-free - Digital time setting of direct UV exposure: 1 min 24hrs / non-stop (increment 1 min) - UV-recirculator: 1x25W (efficiency >99% per 1 hour) - Daylight lamp (for working area illumination): 1 x TLD-15W - Thickness of side panels: 2 mm - Thickness of upper front panel: 8mm - Thickness of screen: 4 mm - Optical transmission: 95% - UV protection: >96%, UV-protection film - Working area: 645 x 490 mm - Opening dimensions (fully raised protective screen): 645 x 190 mm - Safety features: Automatic open UV-lamp switch off when screen is open - Power outlets inside the unit: Inlet for cords and 1x Built-in socket, max 1000 W 	200,000.00	400,000.00


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		<ul style="list-style-type: none"> - Dimensions: at least 690 x 535 x 555 mm - Weight: 39kg to 43kg - Power Supply: AC100-240V 50/60Hz 		
10	1 Units	<p>UV Transilluminator with Camera Box for Gel Documentation (CVMBS)</p> <ul style="list-style-type: none"> - Material: painted aluminum - Dimensions: at least 50 x 35 x 32.5 (H x L x W) - View area: at least 26 cm x 21 cm - Camera box: With viewing window and a separate camera window compatible with DSLR camera - Camera: High resolution color CMOS - Resolution: 2048 x 1536 - Lens: F1.4 12mm Fixed focal lens - Zoom: 1x~8x 0.2x step / 1x step adjustable - Control: 10-inch touch LCD panel or PC software control - Filter: Orange filter (50 mm) - File format: 16-bit TIFF, 8-bit TIFF, BMP, JPEG - Exposure time: 1 msec~ 10 sec - Saturation: White level - Power: AC100V-240V 2A 50/60Hz (AC adapter) - Color mode/Monochrome mode selectable - Gel tray included 	500,000.00	500,000.00
11	1 Units	<p>Digital pH Meter with pH Pen Tester for liquid solutions (CVMBS)</p> <ul style="list-style-type: none"> - Handheld pH/ORP/Temperature Meter - Automatic pH calibration – up to 5 points (NIST, USA pH buffers) / up to 6 points (DIN pH buffers) - 0.01 pH resolution - Offset and average slope display - Automatic / manual temperature compensation and temperature calibration function - ORP calibration option - °C & °F temperature readings - With real-time clock and date/time stamp for GLP compliance - Auto log data; built-in memory can store up to 1000 data - Auto shut-off (programmable: up to 30 minutes) - Auto stable, auto hold, and real time measurement modes - Calibration alarm (programmable: up to 90 days) - Built-in electrode holder allows 2 electrodes to be attached - Monochrome LCD with white LED backlight: 50 x 50 mm - Phono jack output for connecting meter to computer via PC (USB) cable for data collection and to printer via printer (RS232) cable for printout - Casing is IP67 waterproof/dustproof, shock & scratch resistant, non-slip 	100,000.00	100,000.00

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		<ul style="list-style-type: none"> - Powered by 2 x AA batteries - Packaged with electrode and calibration solutions in carrying case - With meter kit - 2 x AA batteries - Manual and quick guide - 9652-10D plastic-body, gel-filled pH Electrode - integrated with temperature sensor - pH 4.01, 7.00, 10.01 buffers (60ml each) - Carrying case <i>Specifications:</i> - pH Range -2.00 to 16.00 pH - Resolution 0.01 pH - Accuracy ± 0.01 pH - Calibration Points Up to 5 (USA & NIST) / Up to 6 (DIN) - Buffer Options: USA, NIST, DIN - ORP Range ± 2000 mV - Resolution 0.1 mV ($< \pm 1000$ mV), 1 mV ($\geq \pm 1000$ mV) - Accuracy ± 0.3 mV ($< \pm 1000$ mV), 0.3% of reading ($\geq \pm 1000$ mV) - Calibration Option Yes - Temperature Range -30.0 to 130.0 °C / -22.0 to 266.0 °F - Resolution 0.1 °C/°F - Accuracy ± 0.5°C / ± 0.9 °F - Calibration Option: Yes - Memory Data: 1000 - Auto Data Log: Yes - Real-time Clock: Yes - Date & Time Stamp: Yes - Measurement Modes: Auto Stable, Auto Hold, and Real time - Offset & Average Slope Display: Yes - Calibration Alarm to 90 days): Yes (Programmable: Up - Auto Shut-Off to 30 minutes): Yes (Programmable: Up - Electrode Status: Yes (On screen display) - Diagnostic Messages: Yes - PC Communication: Yes, via PC (USB) - Printer Communication: Yes, via Printer - Meter Inputs BNC (for pH electrode), phono (for temperature sensor) - Meter Output phono (for PC/printer connection) - Display Custom LCD with backlight - Housing IP67 rating, shock & scratch resistant, non slip - Power Requirement 2 x AA batteries - Battery Life > 500 hours - Meter Dimensions 160 (L) x 80 (W) x 40.60 (H) mm 		

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12	1 Units	<p>Nephelometer (CVMBS)</p> <ul style="list-style-type: none"> - Test type: Minimum Inhibitory Concentration (MIC) <i>Physical characteristics</i> - Instrument dimensions: <ul style="list-style-type: none"> 19 cm (W) x 13.5 cm(D) x 9.7 cm (H) 7.5 in (W) x 5.3 in (D) x 3.8 in (H) - Weight: 1 kg; 2.2 lb Electrical -Power requirements: 100-240 V AC; 400 mA - Power consumption: at least 15 watts 	100,000.00	100,000.00
13	1 Units	<p>Gas Range with Hood (CAFENR)</p> <ul style="list-style-type: none"> - Stainless steel body - Flame failure safety device - Cast iron pan supports - Electronic ignition - Aluminum burners and cast-iron caps - 5 gas burners - 1 x dual wok burner (4.0kW) - 1 x rapid burner (3.0kW) - 2 x semi-rapid burner (1.75kW) - 1 x auxiliary burner (1.0kW) - Gas convection oven - Electric grill - Oven volume capacity: 142 liters - Electrical requirements: 220/240 V - 50/60Hz - Product Dimension- 89.5 x 60 x 85.3-92.3cm - Weight - max 74.50 kgs - Handling - Fragile - Warranty - 1 year - Size 90 cm 	100,000.00	100,000.00
14	1 Units	<p>Food Dehydrator Industrial (CAFENR)</p> <ul style="list-style-type: none"> - Power:6000w - Fan power:36W - Outside dimensions of the body (without wheels) CM:53.5*93.4*168 - Inside size: 41*37.3*72.9 - Size of oil receiving plate: 40*30 - Shell material/thickness:201 0.8 - Visible glass material: tempered - Gross weight: 115KG - Net weight:92KG - Number of fans:8 - Temperature range: 30-90 degrees - Time range: 30min-24 hours - Motor speed: 1250rpm - Plug/air switch:32A air switch - Lecon chef--Vertical Dehydrator With 80 Food Trays - Voltage: 220v/50Hz - Capacity:600L - Rated power:6000W - Dry as much as possible: 	70,700.00	70,700.00

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		<ul style="list-style-type: none"> - Multilayer grid - Intelligent control panel - Stainless steel 		
15	1 Units	<p>13" Medium-Duty Manual Gravity Feed Meat Slicer - 3/4 hp (CAFENR)</p> <ul style="list-style-type: none"> - Razor sharp 13" stainless steel blade; rated for 3-4 hours of use daily - Adjustable thickness knob allows for precise slicing from 1/16" to 1/2" - Manual operation gives you greater control and ensures constant monitoring - Generous 11" x 11" product tray - 3/4 hp motor; 120V <p><i>Overall Dimensions:</i></p> <ul style="list-style-type: none"> - Width: 19" - Depth: 25" - Height: 17" - Maximum Product Size: 11" x 8" - Blade Diameter: 13" <p><i>Carriage Dimensions:</i></p> <ul style="list-style-type: none"> - Length: 11" - Width: 11" 	85,000.00	85,000.00
16	1 Units	<p>Chamber Vacuum Sealer with 10" Seal Bar (CAFENR)</p> <ul style="list-style-type: none"> - Ensures Leak-Free Sealing – <ul style="list-style-type: none"> - provides high vacuum pressure to effectively seal soups, sauces, marinades, or even your favorite cocktails. - Marinating Made Easy - marinate food safely in chamber using a bag or bowl. - Easy-to-Use Chamber Sealer Machine - with straightforward, one-touch controls to ensure a perfect, positive seal. With 11.5-inch chamber vacuum seal bar and 2 sealing wires, to pack more food items faster. - Sleek, Compact Design - Machine chamber measures approx. 11.5"W x 12"D x 3.5"H and with clear glass lid for easy loading. - Vacuum Accessory Hose - vacuumize external vacuum containers and jars <ul style="list-style-type: none"> - Material: Metal plastic - Color: Black - Product Dimensions: approx. 10.5"L x 10.5"W x 3.5"H - Power Source: Corded Electric - Operation Mode: Automatic - Wattage: 280 watts - Voltage: 120 Volts 	90,000.00	90,000.00

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17	1 Units	54" Solid Door Reach-In Freezer (CAFENR) <ul style="list-style-type: none"> - Capacity: 365 liters - Dimension: (WxHxD) 913x1790x735 - Main technology: No Frost - Inverter 	160,000.00	160,000.00
18	1 Units	Commercial Chest Freezer- minimum 19.4 cu. Ft. (CAFENR) <ul style="list-style-type: none"> - Installation Type - Freestanding - Included Components - Defrost shovel, user manual, storage basket - Adjustable Feet -4 - Wattage-149.99 Microwatt - Shelves-2 Shelves - 220Volts - Voltage/Frequency - Inside Cabinet Walls- Aluminum - Lid/Wall thickness-80mm/70mm - Kind of coolant-R600a - Certification-ETL NSF - Door Material Type-Foaming Door - Adjustable Thermostat-7 Level - Temperature adjustment--13 to 14 °F and quick-freeze function with 7-speed - Door Hinges-Angle of 45° to 90° - Color-White - Model-Freestanding Top Door Adjustable 7 Basket - Type-Chest - Installation-Freestanding -- Door Style-Top-Freezer - Number of Doors-1 Door - Defrost Method-Frost-Free/Automatic Defrost - Energy Star-A+++ - MPN-Energy Saving Large Capacity - Operating Sound Rating-Less Than 25 dB - EC Range-A+++ - G - Finish-ABS - Energy Consumption per Year-Less than 200 kWh - Material-Steel + Coating - Open Door Width-60.1-65 in (152.8 cm) - Power 72-95 W - Item Type-Chest - Door Type-Solid Door - Number of Sections-2 Sections 	70,000.00	70,000.00
19	1 Units	Compensated Calorimeter (CAFENR) <ul style="list-style-type: none"> - Compensated Jacket calorimetry - Removable 1108P Oxygen Vessel and Bucket 4-7 tests per hour - Operator time per test is approximately 6 minutes - 0.1-0.2% precision class instrument - 0.0001 °C Temperature Resolution - 52-12000 calorie sample range dependent upon vessel selected 	700,000.00	700,000.00

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		<ul style="list-style-type: none"> - 0.05% Linearity across operating range - SD memory and TCP/IP network communications - USB Port for balance and printer connections - Updates via the Internet - approx. Dimensions (in) 23w x 16d x 17h 		
20	1 Units	<p>Refrigerated Centrifuge (CAFENR)</p> <p>Centrifuge Machine 2ml/5ml/10ml/15ml/50ml x 6</p> <ul style="list-style-type: none"> - Low Speed 500-4000rpm,2146xg RCF (relative centrifugal force) - Lab Benchtop Centrifuges with Timer - Large capacity 6 of 15ml conical tubes with screw caps - Speed regulation accuracy +30 r/min - Timing range 10s – 99min59sec - Noise: <60dB (A) - Voltage: AC 220V/110V – 50Hz 5A - Dimensions: 375*320*240mm (l*W*H) - Weight: 5.5 kg - Warranty: 2 years <div style="text-align: center;">  </div> <p>(Photo for reference only)</p> <ul style="list-style-type: none"> - Designed to maintain a constant temperature for ensuring the viability of heat-sensitive samples, refrigerated centrifuges are a staple in many labs. They are frequently used in biology, biochemistry, and clinical laboratories. 	100,000.00	100,000.00
21	4 Units	<p>Desiccator (CAFENR)</p> <ul style="list-style-type: none"> - Chamber Volume (Liters) 10.5 - Plate Size (mm) 230 - Exterior Height (Inch Short) 15.5 - Exterior Height (cm) 39.4 - Clearance Above Plate (mm) 120 - Flange Outside Diameter (OD)(cm) 32 - Material Glass - Color Clear - Glass 9” dia. - Clear 	52,000.00	208,000.00

Item No.	Unit	Specifications	Unit Price	Total Price
23	1 Units	<p>Spectrophotometer – Optical System (CAFENR)</p> <ul style="list-style-type: none"> - Single Beam, Grating 1200 lines/mm - Wavelength Range <ul style="list-style-type: none"> - 190~1100nm - 320-1100nm - Spectral Bandwidth <ul style="list-style-type: none"> - 2nm - 4nm - Wavelength Accuracy <ul style="list-style-type: none"> - ±0.5nm - Wavelength Repeatability <ul style="list-style-type: none"> - ≤0.3nm - Photometric Accuracy <ul style="list-style-type: none"> ±0.002A (0~0.5Abs), ± 0.004A (0.5~1.0Abs), ± 0.5%T (0~100% T) - Photometric Repeatability <ul style="list-style-type: none"> 0.001Abs (0~0.5Abs), 0.002Abs (0.5~1.0Abs), ≤0.2%T (0~100% T) - Stray Light <ul style="list-style-type: none"> ≤ 0.05% T @360nm; 220nm ≤0.05% T@ 360nm;220nm - Stability <ul style="list-style-type: none"> ±0.001A/h @ 500nm - Baseline Flatness <ul style="list-style-type: none"> ±0.002A - Noise <ul style="list-style-type: none"> ± 0.0005A - Display <ul style="list-style-type: none"> 480*272 65 thousand true color TFT LCD 	100,000.00	100,000.00
TOTAL:			₱5,365,601.00	