

to: DPM

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PR-2024-1008-228844

10-11 OP



Republic of the Philippines
VISAYAS STATE UNIVERSITY
Visca, Baybay City, Leyte

PURCHASE REQUEST

PPMP No. : **PPMP-2025-100324-0755**

PR No.: **GF-2024-10-02497**

Date: **10-08-2024**

Dept./Office: **DPM**

Category: **Laboratory
Equipment**

Section/End-User: **Raul Anthony S. Valenzona**

Funding Source: **General Fund - CO**

Project Title/Code: **DPM 2025_Capital Outlay**

Item #	Item Description	Unit	Qty	Unit Cost	PAR/ICS	Total Cost
1	40x-2000x LED Biological Trinocular Compound Microscope with 5MP Camera and Macbook Pro Laptop	unit	3	300,000.00		900,000.00

Specification:

Microscope Specifications:

- **Head:** Trinocular, 45-degree inclined, 360-degree swiveling
- **Nosepiece:** Revolving quadruple
- **Objectives:** Achromatic, DIN 4X, 10X, 40X (Spring), 100X (Spring, Oil)
- **Eyepieces:** WF10X and WF20X
- **Stage:** 3D double layer, size 5.5 x 5 in (14 x 12.7 cm), X-Y stroke: 3 x 2 in (7.6 x 5.3 cm)
- **Focusing:** Coaxial coarse and fine
- **Condenser:** Abbe, NA=1.25, with iris diaphragm
- **Illumination:** LED
- **Power Supply:** 100-240VAC, 0.35A adapter to DC6V, 2A
- **Optical System:** Achromatic optical system with precise optical glass elements
- **Ocular Diopter:** Adjustable on left ocular tube
- **Framework:** Heavy-duty metal
- **Camera:** 5MP USB camera with Windows/Mac software
- **Approval:** GS and CE
- **Warranty:** Five (5) years

Camera Specifications:

- **Sensor:** Aptina MT9P001 (color)
- **Sensor Type:** CMOS
- **Sensor Size:** 5.7x4.3mm (1/2.5" class)
- **Pixel Size:** 2.2 micrometers
- **Resolution:** 5.1MP
- **Frame Rate:** 55fps @ 640x480, 18fps @ 1280x960, 6.8fps @ 2592x1944
- **Sensitivity:** .53V/Lux-sec
- **Connectivity:** USB 2.0
- **Compatibility:** Windows (32/64 bit) XP/Vista/7/8/10, Mac OSX, Linux

- **Mounting Sizes:** 23mm, 30mm, 30.5mm, and C-mount

Packing List:

- Trinocular Microscope Body
- Four Achromatic DIN Objectives: 4X, 10X, 40X (S), 100X (S, Oil)
- One Pair of WF10X Eyepieces
- One Pair of WF20X Eyepieces
- Bottle of Immersion Oil
- Dust Cover
- AC Adapter
- User's Manual Download
- One 5.0MP Color Digital Camera - MU500B
- One 0.5X C-mount Relay Lens
- One 6' (1.8m) USB Cable
- Two Eyepiece Adapters: 30.0mm, 30.5mm
- Two Rubber Seal Rings
- One CD with Software, Driver, and User's Instructions

MacBook Pro Laptop Specifications:

- **Display:** 13-inch Retina display with True Tone
- **Chip:** Apple M1 chip with 8-core CPU, 8-core GPU, and 16-core Neural Engine
- **Memory:** 8GB unified memory
- **Storage:** 256GB SSD
- **Keyboard:** Magic Keyboard
- **Touch Bar:** Yes, with Touch ID
- **Trackpad:** Force Touch trackpad
- **Ports:** Two Thunderbolt / USB 4 ports

2	Electric Compound Binocular Microscope (4)	unit	7	55,000.00		385,000.00
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Specification:

Objective Lenses:

- DIN standard Achromat 4x, 10x, 40xR, 100xR oil immersion objectives
- Parfocalled, parcentered, color-coded
- Mounted in a reverse-facing quadruple nosepiece

Eyepieces:

- Wide field 10x eyepieces, FN18
- Interpupillary adjustment: 55-75mm
- Eyepiece can be fitted with a 20mm diameter reticle

Total Magnification:

- 40x, 100x, 400x, 1000x

Specimen Stage:

- Large 125mm x 115mm stage

- Built-in mechanical stage providing X-Y movement of 55mm x 75mm

Focusing:

- Rack and pinion coarse focus with tension adjustment
- Separate fine focus
- Coarse focus knob control: moves stage up or down 20mm
- Fine focus: moves 0.2mm per rotation

Condenser:

- Abbe NA 1.25 condenser with iris diaphragm
- Filter holder for 32mm filter

Illumination:

- 1W LED illumination with on/off switch and intensity control
- Voltage sensing: 100~240V

Warranty:

- 5-year warranty (excluding LED bulb)

Includes:

- Dust cover
- Blue filter

3	Inverted Microscope with Camera and Monitor	unit	1	330,000.00		330,000.00
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Specification:

- **Total Magnification:** 100X ~ 400X (Standard)
- **Eyeiece:**
 - WF10X, Ø22 mm
 - WF16X (Optional), Ø11 mm
- **Eyeiece Diameter:** Around Ø30 mm
- **Parfocal Distance:** Around Ø10 mm
- **Objectives:**
 - **Brightfield (BF):**
 - 10X/0.25
 - 20X/0.40
 - 40X/0.60
 - **Phase Contrast** (optional):
 - 10X/0.25
 - 20X and 40X (Optional)
- **Nosepiece:** Quadruple
- **Focusing:**
 - Minimum Division: Around 2 µm
 - Effective Distance: Around 11 mm
- **Stage:**
 - Double Layer Mechanical Stage
 - Size: Around 112 x 79 mm

- **Condenser:**
 - LWD (Long Working Distance)
 - Around W.D. 70 mm, with phase-contrast
- **Petri Dish Sizes:**
 - Around 86 mm x 129.5 mm (suitable for Ø87.5 mm circle dish)
 - Around 34 mm x 77.5 mm (suitable for Ø68.5 mm circle dish)
 - Around 57 mm x 82 mm
- **Phase Contrast System:** Sliding phase contrast equipment, center adjustable
- **Light Source:** At least 9W LED, with brightness control
- **Electrical:** 220VAC, 50 Hz, with voltage regulator

4	Laboratory Refrigerator	unit	3	120,000.00		360,000.00
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Specification:

Specifications:

Temperature Control:

- Microprocessor control
- Large LED display for easy viewing
- Adjustable temperature range: 2°C to 8°C (increment of 0.1°C)
- Multiple sensors for accurate temperature display and control
- Records lowest and highest temperature values

Safety Control:

- Malfunction alarms: high-temperature, low-temperature, power failure, door jammed, low backup battery voltage
- Over-temperature alarm with customizable settings
- Three alarming methods: buzzer, digital flashing, and remote alarm
- Protection functions: power-on delay, time between stops
- Optional temperature recorder monitor system

Refrigeration System:

- Highly efficient compressor and fan from a reputable brand
- Forced-air circulation for consistent temperature
- Large evaporator design for strong cooling and high temperature uniformity
- CFC-Free/HCFC refrigerant
- Reduced frost accumulation and defrosting

Design and Features:

- Safety door lock
- Auto defrost function
- Wide voltage design (192V to 242V)
- Inner LED lighting
- Caster design for mobility
- No condensation glass door
- Adjustable shelves
- Optional foaming door
- Rear stopper against the back wall

Technical Specifications:

- **Cabinet Type:** Vertical
- **Climate Class:** ST
- **Cooling Type:** Forced air cooling
- **Defrost Mode:** Auto
- **Refrigerant:** HC, R600a
- **Cooling Performance:** 4°C
- **Temperature Range:** 2°C to 8°C
- **Controller:** Microprocessor
- **Display:** LED
- **Alarm Types:** Audible, Remote
- **Interior:** Galvanized steel powder coating (white)
- **Exterior:** Galvanized steel powder coating (white)
- **Power Supply:** 220V/50Hz
- **Power Consumption:** 240W
- **Capacity:** 395L
- **Net/Gross Weight:** 95/115 kg
- **Interior Dimensions (W x D x H):** 500 x 510 x 1550 mm
- **Exterior Dimensions (W x D x H):** 600 x 650 x 1785 mm
- **Packing Dimensions (W x D x H):** 660 x 710 x 1885 mm
- **Container Load (20'/40'/40'H):** 27/54/54 units

Additional Features:

- Remote alarm: Yes
- Power failure alarm: Yes
- Sensor failure alarm: Yes
- Low battery alarm: Yes
- Door ajar alarm: Yes
- Lockage: Yes
- Inner LED light: Yes
- Foot: No
- Caster: Yes
- Test Hole: Yes
- Shelves/Inner Doors: 6 shelves, no inner doors
- Foaming Door: Optional
- USB Interface: Yes
- Temperature Recorder: Optional

5	Laminar Flow (Double)	unit	2	220,000.00		440,000.00
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Specification:

Specifications:



- **External Size (W x D x H):** 1040 x 660 x 1770 mm
- **Internal Size (W x D x H):** 940 x 560 x 545 mm
- **Work Surface Height:** 750 mm
- **Display:** LED Display
- **Airflow Velocity:** Average of 0.3 ~ 0.5 m/s

- **Material:**
 - **Main Body:** Cold-rolled steel with anti-bacteria powder coating
 - **Work Table:** 304 stainless steel
- **Pre-filter:** Polyester fiber, washable
- **HEPA Filter:** 99.995% efficiency at 0.3 μm
- **Noise Level:** <65 dB
- **Front Window:** Manual, 5 mm toughened glass, anti-UV
- **Max Opening:** 310 mm
- **UV Lamp:** 20W x 1, emission of 253.7 nanometers
- **LED Lamp:** 12W x 1
- **Power Consumption:** 350W
- **Caster:** Universal caster with leveling feet
- **Power Supply:**
 - AC220V ±10%, 50/60 Hz
 - 110V ±10%, 60 Hz
- **Standard Accessories:** LED lamp; UV lamp x 2; Base stand
- **Optional Accessories:** Electric height adjustable base stand
- **Gross Weight:** 150 kg
- **Package Size (W x D x H):** 1190 x 890 x 1340 mm

Details:

- **Design:** The cabinet features a double-sided design for enhanced airflow and contamination control.
- **Airflow:** Provides a controlled airflow velocity suitable for cleanroom environments.
- **Filters:** Equipped with a high-efficiency HEPA filter and washable pre-filter for superior air filtration.
- **Lighting:** Includes both UV and LED lamps for optimal illumination and disinfection.
- **Build Quality:** Constructed with durable materials and designed for easy maintenance.
- **Mobility:** Mounted on universal casters with leveling feet for stability and mobility.
- **Optional Features:** Includes an electric height adjustable base stand for ergonomic flexibility.

This laminar flow cabinet is suitable for laboratories requiring clean and controlled environments for sensitive work.

TOTAL				2,415,000.00	
Purpose: for laboratory/instruction use					
Checked by:			Funds Available:		
 GENESIS C. ALBARICO			 ALICIA M. FLORES T4S		
TWG - Laboratory Equipment			HEAD, BUDGET OFFICE		
Signature:	Prepared by:	Noted by:	Approved by:		
Printed Name:	RAUL ANTHONY S. VALENZONA	MARIA JULIET C. BENIZA	PROSE IVY G. YEPES		
Designation:		UNIT HEAD, PROJECT LEADER	PRESIDENT, VSU		