Student Technology Fee

Grant Proposal

2009.025

2008-09

Tracy Brown

Approved Denied

Comment: _____

Diana Hamilton

Approved Denied

Comment: _____

Gary Gatch

Approved Denied

Comment: _____

Mike McDonald

Approved Denied

Comment: _____

Dale Martin

Approved Denied

Comment: _____

Student Technology Fee
Grant Proposal Request Form
Fiscal Year 2008-09
Northwestern State University of Louisiana

ALL BLANKS MUST BE FILLED COMPLETELY

Prepared by: Brenda R. Woodard   For: Veterinary Technology Program

Department/Unit: Biological Sciences College: Science & Technology Campus: Natchitoches

Which NSTEP Goals/Objectives does this project meet? 1, 3, & 9

Requested equipment will be located/installed/housed? Building 090, Bienvenu Hall Room302/A

Are department property policies and procedures in place for requested equipment? Yes

Which individual will be responsible for property control of the requested equipment?

Signature: Brenda K Woodard, rvt   Date: October 31, 2008

Grant Proposal Requested Amount: $ 41,061.97   Budget Attached (circle one): YES/NO

Grant delivered to Student Technology located in Watson Library, Room 113. Date 10/ 31/2008

The grant proposal must include all specifications, description, model number, quotation, cost, state contract number, and vendor for each item. If the proposal does not include all requested information, it will be returned to requestor.

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1. Describe target audience.

   Veterinary Technology students are required to complete the veterinary surgery/anesthesia course in their last year. This course (VTEC 2200-2201 Veterinary Hospital Technology II) in many ways is a culmination of coursework completed in the Veterinary Technology curriculum, as it focuses on the patient from the time of presentation until the patient recovers from the surgical or dental procedure.
   Students take a patient history, perform a physical examination, draw blood samples and run laboratory screening tests, set IV catheters, administer IV fluids and anesthesia, monitor the patient through the anesthetic recovery period, assist in a surgical procedure or dental prophylaxis procedure, stay with the patient until recovered from anesthesia, detail the patient's discharge summary, and prepare the surgical instruments and laboratory for subsequent procedures, all under the direct supervision of veterinarians and the registered veterinary technician. Students work in groups of 3-4 per animal procedure; enrollment in the laboratory is typically 18-28 students/semester. This is an intensive "hands-on" laboratory that prepares students for board examination and a career as a Registered Veterinary Technician.

2. Describe project/initiative for which you are requesting funds.

We are requesting funds to upgrade technology in the surgery/anesthesia laboratory. We need to update the desktop computer in the office area of this laboratory – this computer is loaded with veterinary practice management software and works as the "server" computer to twelve others in the clinical pathology laboratory and the computer laboratory. Linking these computers allows students to practice using this software as they will in the "real world" because the computer can be used to enter the patient record; the laboratory blood screening machines can report laboratory results directly to this computer. Our current computer is older and quite slow when performing these tasks.

Just released technology in blood chemistry analyzers will keep our clinical pathology laboratory at the current "state-of-the-art." Since we received a grant last year to update this area for veterinary technology, most of our analyzers are representative of what is available in the workplace, but students will need instruction in the newest blood chemistry analyzer. This machine (IDEXX Catalyst DX Analyzer) will be used for pre-anesthetic screening for liver and kidney disease, diabetes, etc. and will be linked to the server computer.

Surgical procedures performed in the laboratory sometimes entail unusual cases (i.e. the dog who ate a shoe, the puppy whose tummy drug the ground, the rabbit with a tumor, etc.) that provide great learning opportunities for students. We are requesting a digital camera with the capability of capturing images of these procedures in detail (macro zoom) and are requesting a printer to develop poster type presentations of these cases for students who were not there to witness them.

Patient care and monitoring are critical to the outcome of our patients and vital to the learning process for good veterinary technicians. We are requesting the latest technology in anesthetized patient monitoring, so that students will be able to follow the ECG, respiration, temperature, blood pressure, oxygen and carbon dioxide levels of each patient through the anesthesia/surgical procedure. We are also requesting funds for intravenous (IV) fluid infusion pumps in two sizes, for larger or smaller volumes to be infused accurately without danger of overhydration. And finally, IV fluid warmers are now on the market for veterinary patients, and these will help prevent hypothermia in our patients; our students will be trained on their usage in this laboratory.

3. State measurable objectives that will be used to determine the impact/effectiveness of the project.

a. The IDEXX laboratory analyzer, computer, and printer will be installed. The remaining stand-alone equipment will be placed in the laboratory and in use by the students and faculty in veterinary patient care.
b. Students will be instructed in the use of this equipment, and will have access to it for practical application in laboratories.
c. Course syllabi will be updated to reflect the use of this equipment.

4. Indicate how each project objective will be evaluated.

a. The laboratory will be inspected to insure that the requested equipment is properly placed and utilized in the course.
b. The syllabi will be inspected and compared to the existing syllabi to insure that updated patient care techniques have been implemented in the course.

5. If funded, which NSTEP http://www.nsula.edu/nstep/NSTEP.pdf **objective(s) will this funding of this project advance? How will funding of the project advance the University and College/unit technology plan?**

    a. This project will advance the following NSTEP objectives:

        1. *To improve access to technology by students, faculty, and staff at Northwestern State University.* Specifically, to expose students to modern laboratory equipment, train them in its use, and give them basic experimental skills required in post-graduate careers.

        3. *To upgrade laboratories with modern technology.* Specifically, to use modern instruments appropriate in complexity for the current "state-of-the-art" in veterinary medicine and technology.

        9. *To provide and support hardware and software upgrades, new hardware and software for specialized functions, training for technical support personnel.* Specifically, the equipment items requested all represent functions specialized for modern veterinary medicine and the training of personnel for the workplace.

    b. This project will advance the following University and College of Science and Technology goals:

        1. *Northwestern State University will endeavor to create and maintain a responsive, student-oriented environment.* Specifically, by providing the latest technological advances in veterinary medicine to student instruction, we will respond to the student's need to be well educated.

        2. *Northwestern State University will provide programs, services, and operations throughout the University of high quality and effectiveness.* Specifically, the Veterinary Technology program is fully accredited by the American Veterinary Medical Association. The next site visit is scheduled for September of 2009. Providing modern technological equipment for student instruction says that we care to provide a high quality educational experience for our students, so that they will be well prepared for board examinations and a career in veterinary medicine.

6. Provide a justification for funding of this project. Estimate the number of student that will be served per academic year and in what ways. Please indicate also any unique needs of the target group.

    Veterinary medicine capabilities and technologies continue to advance at a rapid rate; this fact requires that we who are teaching and training Veterinary Technicians keep pace with advancements if we are doing what is best for our students. The Veterinary Technology Program enrollment varies from about 60-80 students total at any given time, and each of these students is required to take the surgery/anesthesia lecture and laboratory in their last year of coursework before a semester-long internship. The course enrollment typically is 18-28 students/semester.

    The NSU Veterinary Technology Program is one of only two accredited programs available in the State of Louisiana, and serves to educate students who will become Registered Veterinary Technicians after successfully completing the National Veterinary Technician Examination and applying for registration. This program helps fill a nation-wide shortage of veterinary technicians (this career was listed as a top ten career for the coming years by MSN). It is a necessity that we have the equipment available to train our students well, so that they will be prepared for their internship and their role in the workplace.

7. List those individuals who will be responsible for the implementation of the project/initiative and indicate their demonstrated abilities to accomplish the objectives of the project.

Dr. Brenda Woodard will be responsible for the implementation of this project. She will be assisted by Dr. James Woodard, and Ms. Jessica Hudspeth, RVT in instruction in this laboratory. Because of the intensive nature of this laboratory, each session is team taught with all three instructors present.

8. Describe any personnel (technical or otherwise) required to support the project/initiative.

Technical personnel will be required only to set up the computer and software with the server link. The remaining equipment is "stand-alone" and veterinary technology faculty/staff will become familiar with its use and instruct each student in its use.

9. Provide a schedule for implementation and evaluation.

Equipment will be installed and in use shortly after purchased. The next course sessions are scheduled for the Spring semester of 2009, and use will be fully implemented as soon as funding has been provided and the purchasing process is complete.

10. Estimate the expected life of hardware and software. Explain any anticipated equipment/software upgrades during the next five years.

The expected lifespan of the equipment requested is ten years plus with the exception of the computer and printer, which may need replacement within five years. All specialized software upgrades for the requested hardware are provided free of charge from the vendors. The IDEXX company provides the veterinary management software to our institution free of charge.

11. Explain in detail a plan and policy that will be in place to ensure property security/controls for any equipment received through a Student Technology Fee.
If you are requesting equipment that will be either/or checkout to students or moved within the department, you must provide a checkout/loan policy.

The Veterinary Technology Surgical Suite is kept locked when not in use for teaching or veterinary procedures. All equipment requested will be placed in this laboratory with the exception of the clinical chemistry analyzer which will be placed in the clinical pathology laboratory and linked by computer to the surgery laboratory. This laboratory is also locked when not in use.

12. Detailed budget include all specs, pricing and vendors. Any incomplete proposal will be returned.

The budget summary is as follows. Attached are more detailed specifications, quotations, and vendor information.

1. (1) Canon EOS Digital Rebel XTi 10.1 MP SLR Camera w/ lenses	$ 1,262.03
(EF 50 mm macro & 28-135 mm zoom) and SD Flash Card	
Vendor: Dell State Contract	
2. (1) Dell OptiPlex 755 Small Form Factor Desktop Computer w/ monitor	1,321.02
Vendor: Dell State Contract	
3. (1) MS Office Professional Plus 2007 software license	52.92
Vendor: Software House International	
4. (1) HP Officejet Pro K8600dn color printer w/ ink cartridges	379.00
Vendor: WSCAII State Contract	
5. (1) Catalyst Dx Clinical Chemistries Analyzer	17,995.00
Vendor: IDEXX Laboratories	
6. (2) Cardell MAX-12 HD Monitors w/ 12.1" color screen/printer;	
BP/SpO2/3-lead ECG/CO2/Resp/Temp/rolling stand @$7,065 each	14,130.00
Vendor: Sharn Veterinary, Inc.	
7. (1) TidalGuard Sp Handheld Capnograph/Pulse Oximeter	2,245.00
Vendor: Sharn Veterinary, Inc.	
8. (2) Versaflo VF1000 Volumetric IV Fluid Pumps @ $688 each	1,376.00
Vendor: Sharn Veterinary, Inc.	
9. (2) Versaflo VF300 Microinfusion Syringe Pumps @ $627 each	1,254.00
Vendor: Sharn Veterinary, Inc.	
10. (3) i-Warm IV Fluid Warmers @ $349 each	1,047.00
Vendor: Sharn Veterinary, Inc.	
Total:	$41,061.97

Attach two (2) letters of support for the project from the following individuals: the requesting department's Dean, the appropriate Vice President (for non-academic units), or the SGA President from the requesting campus (for student requests).

Letters from Dr. Austin Temple, Dean of Science and Technology and Dr. Zafer Hatahet, Department Head of Biological Sciences are attached.

Vendor list:

1. **Dell Inc., State Contract**

2. **Software House International, State Contract**

3. **Hewlett Packard Co., State Contract**

4. **IDEXX Laboratories**
   One IDEXX Dr.
   Westbrook, ME 04092
   1-800-548-6733

5. **SHARN Veterinary, Inc.**
   10008 N. Dale Mabry Hwy.
   Tampa, FL 33618
   1-866-447-4276
   FAX: 813-264-6218
   www.SharnVet.com

Description		
2 GB Ultra II SD Flash Memory Card	Qty	1
	Unit Price	$13.23
Manufacturer Part# SDSDH-002G-A11		
Dell Part# A1993388		
		TOTAL: $13.23

EF 50mm Macro Lens	Qty	1
	Unit Price	$296.99
Manufacturer Part# 2537A003		
Dell Part# A1986016		
		TOTAL: $296.99

Canon EOS Digital Rebel XTi Black 10.1 MP Digital SLR Camera (Body Only/No Lens Included) - MSRP $599.99	Qty	1
	Unit Price	$510.82
Manufacturer Part# 1236B002		
Dell Part# A0726001		
		TOTAL: $510.82

Canon zoom lens - 28 mm - 135 mm.	Qty	1
	Unit Price	$440.99
Manufacturer Part# 2562A002		
Dell Part# A0151168		
		TOTAL: $440.99

OptiPlex 755 Small Form Factor
Date & Time: October 30,2008 4:18 PM CST

SYSTEM COMPONENTS		
OptiPlex 755 Small Form Factor Intel® Core™ 2 Duo Processor E8400 (3.0GHz, 6M, VT, 1333MHz FSB), Genuine Windows Vista® Business Downgrade, XP Professional Installed,E	Qty	1
	Unit Price	$1,321.02
Catalog Number:	25 E1136	

Module	Description	Show Details
OptiPlex 755 Small	Intel® Core™ 2 Duo Processor E8400

Form Factor	(3.0GHz, 6M, VT, 1333MHz FSB)
Operating System(s)	Genuine Windows Vista® Business Downgrade, XP Professional Installed,E
File System	NTFS File System for all Operating Systems
Memory	4GB DDR2 Non-ECC SDRAM,800MHz, (2 DIMM)
Keyboard	Dell USB Keyboard, No Hot Keys
Monitors	Dell 19 inch UltraSharp™ 1908FPW Widescreen, Adjustable Stand, VGA/DVI
Video Card	256MB ATI Radeon 2400 XT, Dual Monitor DVI or VGA (TV-out), low profile
Boot Hard Drives	250GB SATA 3.0Gb/s and 8MB DataBurst Cache™
Floppy Drive and Media Reader	Dell 19 in 1 Media Card Reader
Mouse	Dell USB 2-Button Optical Mouse with Scroll, Black
Basic Systems Management Mode	Intel® vPro™ Secure Advanced Hardware Enabled Systems Management
Removable Media Storage Devices	8X Slimline DVD+/-RW Roxio Creator™ CyberlinkPowerDVD™
Speakers	Dell AX510 Sound Bar for all UltraSharp Flat Panel Displays
Resource CD and DVD	No Resource CD
Dell Energy Smart	Dell Energy Smart Power Management Settings Enabled
Security Hardware	Chassis intrusion switch option
Hardware Support Services	5 Year Basic Limited Warranty and 5 Year NBD Onsite Service
Installation Support Services	No Onsite System Setup
Ship Packaging Options	Shipping Material for System, Small Form Factor

Mouse Pad	Mouse Pad
Processor Branding	vPro Sticker
Labels	Vista Premium Downgrade Relationship Desktop
	TOTAL:$1,321.02

	Total Price
Sub-total	$2,583.05
Shipping & Handling	$0.00
Total Price[1]	--

Northwestern State University

Natchitoches, LA 71497

Purchase Order No.

REQUEST FOR PURCHASE ORDER =

Vendor

Name	Software House International
Address	7485 Elliot Road
City	Baton Rouge St LA ZIP 70817
Phone	225-755-6947

Ship To

Name	
Address	
City	St ___ ZIP ___
Phone	

QTY	LINE	DESCRIPTION	EACH	TOTAL
1		Office Professional Plus 2007 All Lng MVL Part Number: 79P-01195 Product Type: Standard	$52.92	$52.92
		ACADEMIC MASTER ENROLLMENT # 5194538 LAICU ENROLLMENT# 9546959		

SubTotal	$52.92
Shipping & Handling	
Taxes State	
TOTAL	$52.92

Payment Details

- ● Check
- ○ Cash
- ○ Account No.
- ○ Credit Card

Name _____
CC # _____
Exp Date _____

Shipping Date

Approval

Date	_____
Order No	_____
Sales Rep	Laurie Conrad
Ship Via	_____

Notes/Remarks

Brenda Woodard

From:	Jennifer Long
Sent:	Thursday, October 30, 2008 4:50 PM
To:	Brenda Woodard
Subject:	RE: quote - color printer (large media)
Attachments:	VetTech.pdf; 17-inch Workstation.pdf; MS Office Pro Plus 2007 License.pdf; image001.png; image002.png; image003.png; image004.gif; image005.png; image006.png; image007.png; image008.png; image009.png; image010.png

Use the quote you have for the printer already...attached you will find quotes for the other equipment requested.

Thanks.

From: Brenda Woodard
Sent: Thursday, October 30, 2008 4:14 PM
To: Jennifer Long
Subject: FW: quote - color printer (large media)

....and the printer.

From: Dianne J. Hamilton
Sent: Thursday, October 30, 2008 2:21 PM
To: Belinda R. Coats; Brenda Woodard
Subject: quote - color printer (large media)

Will send other quotes separately.

Contract: LA - STATE OF LOUISIANA (WSCAII)

Change to item status may result to change in your Quote. Use this page to add saved items to your cart or to replace your current cart with this Quote and checkout.

- **This quote belongs to LA - STATE OF LOUISIANA (WSCAII) contract.**

Quote ID	**2870043**
Quote Name	**Belinda Coats (11x17)**
Quote created by	**dianne@nsula.edu**
Quote created on	**10/30/2008 7:19:15 PM**

Items/description	Part no	Unit price	Qty	Ext price
HP Officejet Pro K8600dn color printer	Base	$366.00	1	$366.00
HP Officejet Pro K8600dn color printer	CB016A#A2L			
in the box: HP Officejet Pro K8600dn Printer, Automatic Two-sided Printing Accessory, HP Jetdirect Fast Ethernet embedded print server, HP 88 Officejet Ink Cartridges (1 each: black, cyan, magenta, yellow), CD, Documentation, power cord and supply				
Energy Star® Compliant Yes				
Print speed, black; after first page				

1

» See details
Up to 35 ppm
Print speed, color; after first page
» See details
Up to 35 ppm
Paper trays (std/max)
1/1
Input capacity (std/max)
Up to 50 sheets / Up to 150 sheets
Media sizes
Letter, legal, executive, statement,
Hagaki, A3, A4, A5, A6, B4, B5, 3 x 5
in, 4 x 6 in, 5 x 8 in, 5 x 7 in, 11 x 17 in,
13 x 19 in, 76 x 127 to 330 x 2540 mm
Memory (std/max)
32 MB/32 MB
Connectivity, standard
Hi-Speed USB port (compatible with
2.0 specifications), HP Jetdirect Fast
Ethernet embedded Print server
Print quality, color
Up to 4800 x 1200 optimized dpi color
(on premium photo paper, 1200 x 1200
input dpi)
Print quality, black
UP to 1200 x 1200 dpi
Paper-handling accessories
250-sheet input tray, automatic two-
sided printing accessory, 150-sheet
output tray
Weight
31.5 lbs.

HP Hi-Speed USB Cable (6 ft./1.8 m)	Q6264A	$13.00	1	$13.00

Subtotal: **$379.00**

IDEXX
LABORATORIES

FACSIMILE TRANSMITTAL SHEET

TO: Jessica	**FROM:** Wendy Rogers
COMPANY: NORTHWESTERN STATE UNIVERSITY	**DATE:** OCTOBER 28, 2008
FAX NUMBER: 318-357-4518	
RE: Catalyst Dx Analyzer Price Quote	**TOTAL NO. OF PAGES INCLUDING COVER:** 2

☐ URGENT   ☑ FOR REVIEW   ☐ PLEASE COMMENT   ☐ PLEASE REPLY   ☐ PLEASE RECYCLE

Good Morning Jessica,

      Attached is the information that you requested. Let me know if you have any questions or if I can be of further assistance. Thank you.

Regards,

Wendy Rogers
IDEXX Laboratories
Houston Account Manager
tel:800-551-0998 x66856 or Direct 207-556-6856
fax: 281-890-4642

Q4 2008 – IHD ORDER FORM and SALES RECEIPT (US)

IDEXX
LABORATORIES

Practice Name   NORTHWESTERN STATE UNIVERSITY   **Doctor/Contact** _____

Billing Address   WILLIAMSON ANNEX _____

City   NATCHITOCHES _____   **State** LA   **ZIP** 71497 _____

Telephone ___ + () 318-357-4316 ___   **Fax** _____   **SAP Account Number** 17981

Practice e-mail   PLEASE INSERT CLINIC EMAIL _____

Your e-mail address subscribes you to the monthly Diagnostic Edge® online newsletter and allows you to receive IDEXX communications electronically.

Shipping Address (if different) _____

Item	List	Amount
VetLab Analyzer Suite		
☐ Catalyst Dx™ with IDEXX VetLab Station	$ 19,995	$ _____
☒ Catalyst Dx™ Analyzer	$ 17,995	$ 17995
☐ LaserCyte® with IDEXX VetLab® Station	$ 19,995	$ _____
☐ LaserCyte® Hematology Analyzer	$ 17,995	$ _____
☐ IDEXX VetLab® Station	$ 3,995	$ _____
☐ IDEXX SNAPshot Dx™	$ 4,695	$ _____
☐ VetTest® Chemistry Analyzer	$ 5,295	$ _____
☐ VetLyte® Electrolyte Analyzer	$ 3,995	$ _____
☐ VetStat® Electrolyte and Blood Gas Analyzer	$ 4,995	$ _____
☐ IDEXX Coag Dx™ Analyzer	$ 3,395	$ _____
☐ SNAP® Reader	$ 3,195	$ _____
☐ IDEXX VetAutoread™ Hematology Analyzer	$ 9,995	$ _____
☐ IDEXX StatSpin® VT Centrifuge	$ 1,295	$ _____
☐ IDEXX VetLab® UA™ Analyzer	$ 1,195	$ _____
Digital Imaging Systems		
☐ IDEXX -DR™ 1417		$ _____
☐ IDEXX-CR™ 1417		$ _____
☐ Grid Selection		$ _____
☐ Cassette # 1		$ _____
☐ Cassette # 2		$ _____
Accessories		
☐ StatSpin® VetExpress	$ 1,595	$ _____
☐ SmartLink™ Connection Kit*		$ _____

*See SmartLink section in the accompanying Terms and Conditions of Sale

Item	Amount
☐ External Printer	$ _____
☐ X-Ray System	$ _____
☐ IDEXX-PACS™ Seat Licenses Qty. ____	$ _____
☐ VetPACS OrthoPlanner	$ _____
☐ Delivery (95-08517-00)	$ _____
☐ Computer Accessories Qty. ____	$ _____
☐ Additional Monitors Qty. ____	$ _____
☐ Additional Training	$ _____
☐ Line Conditioner	$ _____
Credits	
☐ Practice Developer® Points (customer's bank)	$ _____
☐ Other Credits (must specify type)	$ _____
☐ Other Refinancing (explain)	$ _____

Payment Terms
☒ Cash at Install
☐ LaserCyte Cost Per Test
☐ Lease

DLL: ☐
WFFL: ☐

% Rate: _____
Term: _____
☐ Lease Buyout

Sales Order Total

Down Payment	$ _____
Lease Subtotal	$ _____
Applicable Sales Tax	$ _____
Lease Total	$ _____
Cash Subtotal	$ 17995
Applicable Sales Tax	$ Plus Tax
Cash Total	$ 17995 Plus

Install Date: _____

Discounted Extended Maintenance Agreement (EMA)

All IDEXX Instruments come with a one-year warranty; the IDEXX VetLab suite of analyzers come with an additional four-year EMA, and the IDEXX imaging systems come with an additional five-year EMA. These agreements will be billed quarterly after the initial one-year warranty. These EMAs will be added at a one time discount at point of sale, and at full coverage level. Should you wish to opt out of this discounted coverage or service level, please check the appropriate box:

IDEXX VetLab Suite

☐ I do not wish to receive VetLyte Service at the Gold Level; please allow me to purchase the Silver Level of service

☐ I do not wish to receive VetLab Service coverage at this time and understand I will not be offered this discount in the future

☐ I would like to receive the LaserCyte Blue EMA which covers the cost of a LaserCyte Cooler, if it is determined appropriate.

IDEXX Digital Imaging Systems

☐ I do not wish to receive Digital Imaging Service coverage at this time and understand I will not be offered this discount in the future

Notes: _____
_____
_____
_____

By signing, you are granting authorization for disclosure of credit information. Applicant represents that the information provided is complete and accurate. Order and information subject to verification and approval at IDEXX's home office. IDEXX and any lessors reserve the right to check with credit reporting agencies, credit references and other sources in investigating the information given. If you are leasing, the lessor may require additional information.

By signing below, you acknowledge receipt of the Terms and Conditions of Sale ("T&C") and Extended Maintenance Agreement ("EMA") that accompany this document, and you agree to the terms stated above and in the T&C and EMA.

Type of Business (check one) ☐ Corporation/PA   ☐ Partnership   ☐ LLC   ☐ Proprietorship   Years in Business ____

Federal ID/GST Number _____   **SSN/SIN** _____   DVM License (State/Prov) ____ LA

Principal's Name _____   **Principal's Signature** _____

Doctor's Name _____   **Title** _____   **Date** October 28, 2008

IDEXX Contact _____

**Fax to: 1-800-603-7630**

Frm-MRKT-17_F

Cardell® MAX-12HD Veterinary Monitor

Download Data to PC and Create Network

With optional software, the MAX-12HD allows you to easily download graphical and numerical data to your PC with a serial or ethernet cable, and you can create a central monitoring network via direct connection. There's also a video output connection for displaying the data on a larger monitor.

Clear, Crisp 12.1" High Definition Screen

The MAX-12HD color display has a super wide viewing angle of 120 degrees so you can see it from almost anywhere. And the color coded numbers help you spot the parameter you're looking for. Up to eight waveforms can be displayed at one time on the screen with up to four ECG waveforms.
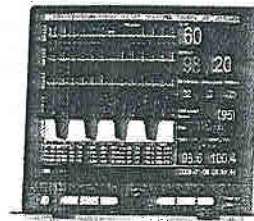
Easy to Use Menu Setup

Just rotate the Menu knob and the function will appear at the bottom of the screen. An arrow will point to each function as the knob is turned. You select that function by pressing the knob. It's as easy as that! Also, any settings you make will remain unchanged even after you turn the monitor off. And there's a Big Font mode for long distance visibility.

IBP and Anesthetic Agent Monitoring Options

You can order the MAX-12 with an invasive BP option and/or a multigas monitoring option. Included accessories are the pressure transducer and IBP cable and/or a multigas probe.

Built-In High Resolution Printer

The thermal array recorder will print the history data for all parameters in increments of four minutes, and print three waveforms. One channel can be used for the ECG waveform and another can be used for a waveform of the SpO_2, CO_2, Respiration, or Invasive BP. Also, when an out-of-limit alarm occurs, the monitor can automatically activate the printer to print the waveform.

Enhanced Trends Easily Accessed

Just press Trend Display to see up to 120 hours of monitoring history for quick patient assessment. You can set the trend display to read in hourly sements - 2, 4, 8, 24+. Time stamps on the screen help you identify the areas for review. A 12 minute full-disclosure ECG waveform recall helps you scroll through past waveforms to find the times you want to check. You can even focus on a single QRS complex and use on-screen calipers to measure and analyze it.
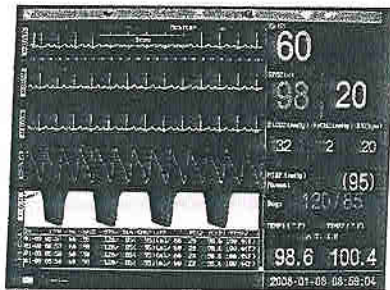
Veterinary Specific Alarm Defaults

Designed for use specifically in veterinary medicine, the Cardell MAX-12 comes with four default alarm settings configured for dogs, cats, horses and other. Alarm limits can be changed at any time and the monitor will remember these changes the next time the monitor is turned on.

BP Cuffs

Now! An economical big screen multiparameter monitor with all the Cardell® "world class" technologies.

Reliable Blood Pressure Readings in Kittens to Horses

The Cardell BP technology has earned a reputation for providing reliable readings in kittens to horses because of the special algorithms developed for animals. Other BP monitors just don't compare.

Besides helping you detect and manage hypotension during surgery, and assess anesthetic depth, you can use it to find, assess and treat primary or secondary hypertension. And then it can assess results of drug and/or diet therapy for hypertension.

Other aspects of the blood pressure component:

- Provides systolic, diastolic, mean arterial pressure in about 20 seconds...hands free.
- STAT mode provides continuous readings for five minutes with 10 second pause between.
- AUTO mode lets you set the monitor to automatically take a pressure every minute, two minutes, three minutes, etc.
- Pulse rate range from 20 to 300 beats/min.
- Stores 600 readings and the last 24 hours of trends.
- 13 cuffs in 7 different sizes included to help you get the most accurate BP.

SpO₂ from Nellcor, the World Leader And Inventor of Pulse Oximetry

Nellcor's all-digital OxiMax® technology provides the most accurate SpO_2 readings available. This special new technology gives you SpO_2 values even in low perfusion and during patient motion, and when you need it most - when your patient is in trouble!

A lingual sensor is provided along with two sizes of clips. A reflectance sensor is also available for use on the tail during dentals or head and neck surgery.

Diagnostic Quality ECG

The monitor comes with a 3-lead system, but a 5 lead set can be chosen. Other features include:

- electrical interference protection
- 4-channel ECG waveform and enlarged waveform display option
- 12-minute ECG waveform storage recall to review any abnormal ECG
- Displays up to 4 different leads
- Esophageal ECG (free during introduction)
- 3 sensitivity levels

Microstream® CO₂ Technology Offers Accuracy in Small Patients

The Oridion Microstream technology overcomes the limitation found in other sidestream CO_2 monitors. It has a low sample flow rate of 50 ml/min to eliminate problems associated with monitoring CO_2 in animals with small lung volumes...probably half your patients! The 50 ml/min sample flow rate, along with the filter, also reduces the potential moisture problems in the sample line.

Since the sensor is within the monitor, it is protected from damage. Three Microstream FilterLine sets are included: two regular size, and one for very small animals and exotics with dead space as low as .35 ml. Therefore, $EtCO_2$ can be measured accurately in all patient sizes.

Temperature & Respiration

Core body temperature measurements are available through a YSI 401 Series esophageal/rectal probe. A second temperature connection is also available. Alarms may be set for each temperature channel. Respiration is derived from the CO_2 line. Alarms can be set.

Mounting Solutions Available

The Cardell® MAX-12HD Monitor can be mounted with the following accessories available from SHARN Veterinary.

Optional Wall Mount Reorder #Mount 4F

Optional Rolling Stand with Accessory Basket Reorder #Mob.64A

Technical Specifications

Non-Invasive Blood Pressure
Measurement Technique: Oscillometric
Parameters: Systolic, diastolic, mean arterial pressure
Modes: Manual, Auto Cycle, STAT (5 min. consec.)
Determination Time:
- Small Cuff: 18 seconds typical @160 BPM 120/80
- Large Cuff: 26 seconds typical @75 BPM 120/80
Maximum time allowed: 150 seconds
Initial Inflation: 150 mmHg; subsequent inflations to approx. 30 mmHg greater than previous systolic pressure.
Blood Pressure Range: 20-265 mmHg
Pulse Rate Range: 20-300 beats per minute
Accuracy: In humans is shown to be +/-5 mmHg with standard deviation no greater than 8 mmHg. Meets AAMI/ANSI SP10, '02. Animal types vary.

Invasive Pressure - 2 Channels (Optional)
Frequency Response: dc to 12 Hz
Input Impedance: 500 KW
Accuracy: +/-2%

Pulse Oximetry - Nellcor
Pulse Rate Range: 35 - 250 bpm
Pulse Rate Accuracy: +/-3 bpm
SpO_2 Range: 0 - 100%
SpO_2 Accuracy:
- Large Animal: 70-100% +/-2 digits
- Small Animal: 70-95% +/-3 digits
Sensors: Nellcor VetSat & MaxFast

ECG
3 Lead: I, II, III
5 Lead: I, II, III, aVR, aVL, aVF, V
Patient Cable: 6-Pin AAMI Standard

Freq. Response Display: Filtered: 0.5 to 35 Hz
Diagnostic: 0.05 to 100 HZ
X1000 Output: Filtered: 0.5 to 35 Hz
Diagnostic: 0.05 to 100 Hz
Defibrillator Protection: Yes
Electrosurgical Interference Protection: Yes
Accuracy: +/-1 BPM
Heart Rate Average: 8 beats
ECG Display: 4 channels
Sweep Speed: 12.5/25/50 mm/s

Temperature - 2 Channels
Thermistor Type: YSI Series 400 or equivalent
Range: 9°C to 50°C
Accuracy: +/-1°C from 25°C to 40°C

Respiration
Size Adjustment: Manual
Update Time: Approx. 2 seconds

End Tidal CO2 - Oridion
Type: Sidestream
Response Time: 2.0 sec.
Range: 0-99 mmHg
Accuracy: +/-2 mmHg or +/-5%
Breath Rate: 0-150 bpm

Multi-Gas (Optional)
Methods: Infrared absorption
Gas: N_2O, CO_2, Des, Iso, Enf, Sev, Hal.

Trends
Intervals: 2, 4, 8, 24 Hours
Heart Rate: Up to 120 hours averaged trend
NIBP: Last 600 readings, tabular
SpO_2: Up to 120 hour averaged trend
Review Trend Mode: Displays 120 hrs of HR, RR, SpO_2, and IBP in two windows - 2, 4, 8, 24 hour view

Display
Type: Active Matrix TFT color LCD
Screen size: 12.1" Diag.
View Angle: 120° Horiz. & Vert.
Sweep Speed: ECG: 50, 25, 12.5 mm/s
Channels: 6-8

Printer
Type: Thermal
Number of traces: 3
Speeds: 12.5 & 25 mm/s
Mode: Waveform & Data

Battery
Type: Lead acid
Operating Time: up to 3 hours
Normal Charge Time: 12 hours

Power Requirements
Voltage Input Range: 100-230 Vac, 50-60 Hz

Communications
Analog Outputs (worldwide): 13
Serial Ports: RS422, USB, RJ45 (ethernet port).
VGA output port

Mechanical
Size: 10.5"H x 11.5"W x 5.25"D
Weight: 16 lbs.

Safety
Unit meets or exceeds the specifications for the AAMI cardiac monitor standard, IEC.60601.1, CE0143. ISO 9001 & ISO 13485 certified

Warranty
Two years (parts and labor), except accessories.

MAX-12 HD	Cardell Multiparameter Monitor with Integrated Printer. BP/SpO2/3-Lead ECG/CO2/Resp/Temp
MAX-12 HDi	Cardell Multiparameter Monitor w/Invasive BP
MAX-12 HDm	Cardell Multiparameter Monitor w/ Multigas Monitoring.
MAX-12 HDim	Cardell Multiparameter Monitor w/Invasive BP and Multigas Monitoring.

Complies with international standards:
ISO 9001 and EN46001 Certificate.

Distributed by:

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SHARN
VETERINARY, INC.
THE MONITORING COMPANY

12950 N. Dale Mabry Hwy., Tampa, Florida 33618
813-962-6664 or Toll Free 1-866-Hi Sharn (447-4276)
www.SharnVet.com

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TidalGuard™ Sp Monitor
Specifications

Exclusively for Veterinarians

General
Electrical

External Power Supply:	Includes AC adapter/charger
Input:	100 – 250 VAC, 50 – 60 Hz
Battery:	Nickel-metal-hydride: 4.5-hr life
	Standard AA lithium: 5.5-hr life

Environmental

Operating Temperature:	32 – 104° F (10 – 40° C)
Operating Humidity:	0 - 90% relative (non-condensing)

Capnograph

Principle of Operation	Solid state mainstream sensor. Single beam, non-dispersive infrared (NDIR) absorption, ratiometric measurement.
Initialization Time	Capnogram within 15 seconds, full specifications within 60 seconds
Calibration	No calibration required

Capnostat Mainstream
CO2 Sensor

Size:	1.30" H x 1.67" W x .85" D (3.30 x 4.24 x 2.16 cm)
Weight:	64 oz (18 gm) – cable excluded
Shock Resistance:	Withstands repeated 6 ft drops

CO2 (Carbon Dioxide)

Range:	0 – 150 mm Hg, 0 – 19.7%, 0 – 20 kPa at 760 mm Hg Pb
Accuracy:	±2 mm Hg (0 – 40 mm Hg)
	±5% of reading (41 – 70 mm Hg)
	±8% of reading (71 – 100 mm Hg)
Resolution:	1 mm Hg
Response Time:	60 ms
Units:	mm Hg, kPa or %
Compensations:	N2O & O2 (selectable), Pb (automatic)
Capnogram:	Selectable sweep speed

Respiratory Rate

Accuracy	±1 bpm
Range	0 – 150 bpm
Resolution	1 bpm

Pulse Oximeter

Principle of Operation	Red/Infrared absorption
SpO2	(Oxygen Saturation)
Range:	0 – 100%
Accuracy:	±2% SpO2 (for 70 – 100% SpO2) (1 SD)
	Unspecified for 0 – 69% SpO2
Resolution:	1%
Averaging:	Menu selectable 2 or 8 seconds
Audio:	Pitch of pulse tone varies with SpO2 value

Pulse Rate

Range:	30 – 250 bpm
Accuracy:	±1% of full scale
Resolution:	1 bpm
Averaging:	8 seconds
Sensors	Reusable Y-Sensor™ (can be sterilized and used with all patient populations)
Plethysmogram	Pulsatile waveform

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www.SharnVet.com

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Introducing...

Versaflo™ 1000 Volumetric Infusion Pump

Dual Infusion Modes
Set at ml/hr or drops/min

View Setting at a Glance
Front screen shows volume delivered, volume limit, volume rate, time and date

Broad Infusion Capability
Pumps general fluids, blood, nutritionals

Wide I.V. Set Compatibility
Uses Baxter, Abbott, Hospira and others

Micro to Macro Infusion
Delivers precise infusions at rates from 0.1 to 1200 ml/hr

Bolus Capability
Bolus rate from 0.1 to 1200 ml/hr; volume adjustable from 0.1 to 25 ml

Quality Certifications
CE, ISO 9001, ISO 13485 approvals

Alarms/Message Light
8 alarms via bright handle light and sound

Memory Settings
Store up to 10 settings

Warranty - 2 Years

Versaflo 1000

VOLUME DELIVERED: 0ml
VOLUME LIMIT: 100ml
1200.

EXIT CLEAR   ENTER SET   MENU   BOLUS PURGE   START STOP

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THE MONITORING COMPANY

Versaflo™1000 Volumetric Infusion Pump

Versaflo 1000

PRESS START KEY?

1200

SHARN
VETERINARY, INC

Eye-catching Alarm Light
Alarm light will flash on all alarms and warnings

Large 2.7 inch OLED Screen
Large visual area with clock & date display facilitates easy programming

Infused Volume Display
Volume infused into the patient in milliliters is displayed

Target Volume Setting
Volume to be infused (VTBI) , Support micro infusion from 0.1ml/h to 1200ml/h

Bright & Large LED Infusion Rate Display
Super visibility of current infusion rate displayed in drop per minute (D/min) or milliliter per hour (ml/h)

Ergonomic Touch Panel Keypad For Easy Operation

Color Power Indicators
Clear view of current power source
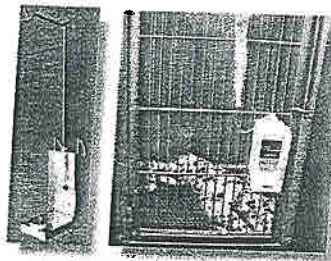
Optional Cage Mount

Flow Rate Range	0.1-1200 ml/h or up to 240 drops/min
Flow Rate Increments	0.1 ml/hr-10 ml/h at 0.1 ml/h increments
	10 ml/hr-200 ml/h at 1 ml/h increments
	200 ml/hr-1200 ml/h at 10 ml/h increments
Total Vol. Infused Display	0.1 - 9999 ml
KVO Flow Rate	Micro: 0.1 ml/hr; Macro: 1 or 2 ml/h
Purge Rate	1200 ml/h
Accuracy	+/- 5%
Display	Bright 2.7" OLED screen with separate large LED infusion rate display
Alarms	Start Reminder, Empty Bag, Door Open, Air In Line, Occlusion, Infusion Complete, Low Battery, Battery Depleted
Occlusion Alarm	4 settings
Pumping Mechanism	Linear Peristaltic
Power Source	AC 90-240V or Ni-MH 2000 mAh battery
Battery Capacity	Approximately 3 hours (6 hours charge)
Languages	English, Spanish, French, Italian
Weight/Dimensions	6.6 lbs / 3.0 Kgs / 6.77" D x 4.13" W x 9.45" H
Accessories Included	Drop Sensor, Pole Clamp, Power Cord, 5 I.V. Sets, Manual
Optional Accessories	Cage mount, 12V auto adapter for travel

Warranty 2 years

INFUSION RATE
UNIT SETTINGS

1   ml/h
2   drop/min

1200

- Drop/min. setting
  Constant flow rates can be set in drop/min.
- ml/hr setting
  Constant flow rates can be set in ml/hr.

SELECT PRESET
INFUSION MODE

6   3.8ml/h   8ml
7   500ml/h   1000ml
8   2.5ml/h   714ml

1200

- Store up to 10 infusion programs to save time and meet administration requirements.

SETUP BOLUS
RATE   435 ml/h
BOLUS   25 ml

7.5

- During infusion, deliver an additional dose of medication by pressing BOLUS/PURGE. It can also be preset.

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www.SharnVet.com

Affordable and Reliable Versaflo™ Syringe Pumps

Versaflo 300

Micro-Infusion Syringe Pump
- Useful for antibiotics given over long period
- For 20ml, 50/60ml & 100ml disp. syringes
- Infusion Options:
  - 0.1 - 150 ml/hr with 20 ml syringes
  - 0.1 - 300 ml/hr with 50/60 & 100 ml syringes
- Four audible & visual alarms
- Battery, built-in recharger & AC power
- I.V. pole clamp included
- Optional 12V adapter
- Weighs 5.5 lbs.
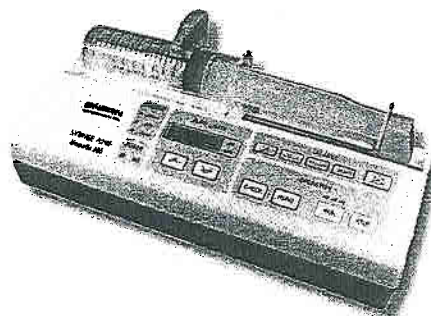
Versaflo 200

High Volume Syringe Pump
- Useful for high rate drug infusions and nutritionals
- Flow rate of 60 - 1500ml/hr
- Uses 20, 50/60 & 100ml disposable syringes
- Automated calculation of delivery rate based on time pre-selection (4, 8, 12, 16, 20 minutes)
- Four audible and visual alarms
- AC power w/rechargeable battery
- Weighs 4 lbs.
- Use to supplement Versaflo 300
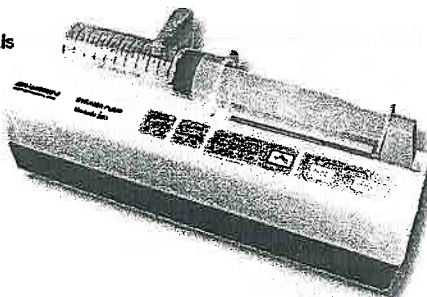
Versaflo 100

Syringe Pump for Small Dosage
- Useful for chronic cancer patients, CRIs, pain control and insulin
- Uses 2 - 12ml disp. syringes
- Delivers 1 - 99 mm/hr (equates to 0.2 - 20 ml/hr)
- "Complete/Occlusion" & "Low Batt" alarms
- Weighs only 1/2 lb.; uses 3 AA batteries
- Small, light and completely portable
- Rent to clients for long term therapy
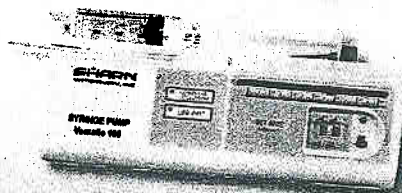
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Versaflo™ Syringe Pump Specifications

	Model 300	Model 200	Model 100
Power	AC & DC with rechargeable battery	AC with rechargeable battery	3 AA Batteries
Flow Rate	0.1 -300 ml/hr	60 -1500 ml/hr*	1m - 99 mm/hr
Syringes	20, 50/60, 100ml	20, 50/60, 100ml	2 - 12ml
Accuracy	+/- 5%	+/- 20 seconds	Less than +/- 2%
Audio/Visual Alarms	NEAR EMPTY COMPLETE OCCLUSION LOW BAT	NEAR END COMPLETE OCCLUSION LOW BAT	COMPLETE/OCCLUS LOW BAT
Battery Length	4 hrs. at 100ml/hr	15 x 50ml syringe at 12 min. setting	30 days or more than 30 syringes at intermed. flow
Weight	5.5 lbs/ / 2.5 kg	3.96 lbs / 1.8 kg	.55 lbs / 0.25 kg
Size	5.6"Dx13.2"Wx4.7"H	4.5"Dx14.4"Wx4.7"H	1.2"Dx6.5"Wx2.4"H
Accessories Included	I.V. Pole Clamp. Power Cord	Power Cord	Bolus Cable, Syringe Cover Protector, Leather Case. Batteries

*Automatically calculates delivery
rate based on time pre-selection.

**Optional Cage Mount
for Versaflo 300 & 200**

**Versaflo 100 Leather Case
Doubles as Cage Mount.**

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WWW.SHARNVET.COM

i-Warm™ Fluid Warmer

FLOW RATE VS. FLUID TEMPERATURE

Room Temperature: 68°F (20°C)
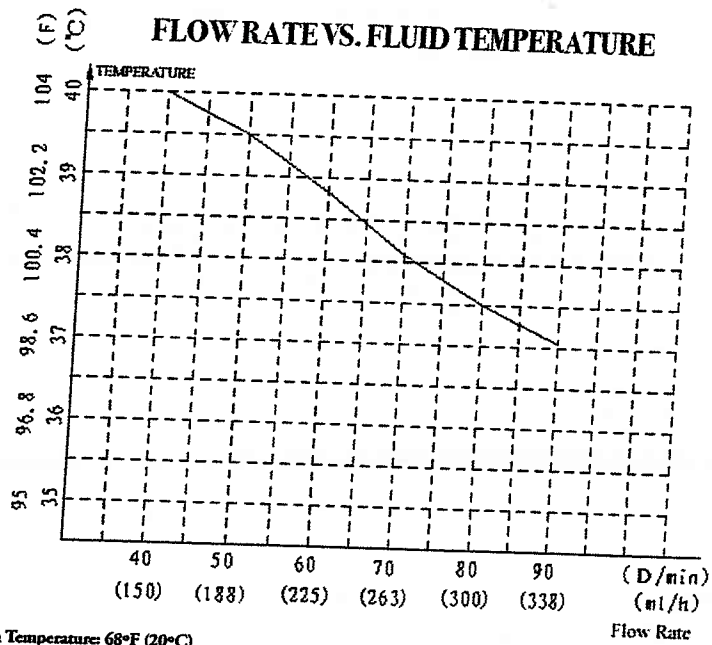
Specifications:	
I.V. Tubing Size	3.0 - 5.0mm
Flow Rate Range	0.1 - 338 ml/hr
Power requirement	120VAC 60 Hz
Weight w/power cord	1.4 lbs
i-Warm Dimension	7 1./2" x 3 1/2" x 2 1/4"
Suggested Operating Temp.	68-77°F
Heating Method	Dry Heat Exchange
Backup Overheating protection	Power interrupted at 113°F with visual and audio alarm
Equipment Classification	IPX I
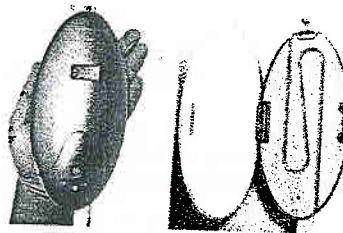
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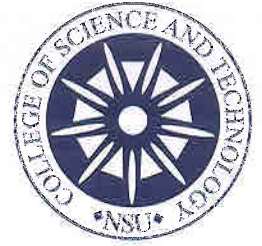www.SharnVet.com

Sharn Veterinary Inc.

FALL 2008 UNIVERSITY PRICING TABLE

MODEL	DESCRIPTION	LIST PRICE	SCHOOL PRICE
Cardell® MAX-12 HD	CARDELL® Multiparameter Monitor with 12.1" Color Screen and Integrated Printer, BP / SpO2 / 3-Lead ECG /CO2 /Resp / Temp.	$8,495	$6,370
Cardell® MAX-12 HDi	Same as Max-12HD w/Invasive BP.	$9,495	$7,095
Cardell® MAX-12 HDm	Same as MAX- 12HD w/ Multigas Monitoring.	$10,495	$7,870
Cardell® MAX-12 HDim	Same as MAX- 12HD w/Invasive BP and Anesthetic Gas Monitoring.	$11,495	$8,595
Cardell® MAX-1 (Not shown)	CARDELL® Veterinary Multiparameter Monitor with integrated Printer, BP, CO2/SpO2/3-Lead ECG/IBP/Resp/Temp	$9,950	$7,460
Cardell® 9500 HD	CARDELL® BP/SpO2/ECG/Resp/Temp Monitor with 7" Color Screen and Integrated Printer (CO2 Probe Optional)	$3,995	$3,059
C-Stat5	Capnostat Mainstream CO2 Probe for use w/9500 HD	$2,000	$1,550
Cardell® 9401	CARDELL® Veterinary Blood Pressure Monitor	$2,195	$1,995
Cardell® 9402	CARDELL® Veterinary BP & SpO2 Monitor	$2,995	$2,245
Cardell® 9403	CARDELL® Veterinary BP/ SpO2/ECG, Resp/Temp Monitor	$3,995	$2,995
Cardell® 9404	CARDELL® Veterinary BP/ECG/Resp/Temp Monitor	$2,995	$2,245
Cardell® 9405	CARDELL® Veterinary BP/CO2/SpO2/ECG, Resp/Temp Monitor	$5,995	$4,616
Cardell® 9454	CARDELL® SpO2/ECG/Resp/Temp Monitor	$3,496	$2,620
CardEX™ 300	Portable Diagnostic 3-channel veterinary ecg	$1,399	$995
CardEX™ 100	Portable Diagnostic 1-channel veterinary ecg	$949	$675
TidalGuard™ Sp	Handheld Capnograph pulse oximeter	$2,995	$2,245
N-65-Vsat	Nellcor Handheld digital pulse oximeter	$1,025	$950
N-20PAV	Nellcor Handheld pulse oximeter with alarms and printer	$1,375	$1,250
N560-Vsat	Nellcor Continuous pulse oximeter w/Oxismart Technology	$1,695	$1,550
PhaseIN MAx AX	PhaseIN Max Multigas Analyzer with CO2 + 5 Agents	$8,300	$6,640
VF1000	Versaflo™ Volumetric IV Fluid pump	$985	$688
VF300	Versaflo™ Micro Infusion syringe pump	$895	$627
VF200	Versaflo™ High volume syringe pump	$575	$400
VF100	Versaflo™ Low dosage syringe pump	$395	$275
I-Warm	IV Fluid warmer	$349	$244

CALL TODAY 866-447-4276 OR FAX YOUR P.O. TO 813-264-6218

October 30, 2008

Ms. Jennifer Long Martin
Student Technology Office
Watson Library

Ms. Long,

I am writing in support of Dr. Brenda Woodard's Student Tech Fee grant proposal to update the surgery/anesthesia facility in the Veterinary Technology Program of the Department of Biological Sciences. In order to be competitive in the job market, our graduates need to be familiar with the technology commonly used in veterinary clinics. The requested equipment fall in this category and are essential for proper training of our students. Dr. Woodard's program has a near perfect record of job-placing its graduates and funding of this grant would help maintain this record. Finally, all of the equipment currently available in the Vet Tech program are used extensively and kept in excellent condition, a testament to Dr. Woodard and her students.
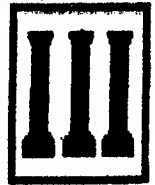
Thank you.

Sincerely,

Zafer Hatahet, Ph.D.
Professor and Chair

October 30, 2008

Student Technology Fee Grant Proposal Committee

Dear Committee Members:

I am pleased to write this letter of support in behalf of a grant proposal written by Dr. Brenda Woodard. Dr. Woodard is proposing to purchase equipment to modernize the surgery/anesthesia laboratory which is used in the Veterinary Technology degree program.   It is very important that our students receive training using current technology and equipment. The purchase of this equipment will insure that our students are receiving state of the art training. This laboratory is offered every semester and the individual enrollment each semester varies from 18 to 28 students.

Thank you for serving on this very important committee and for your consideration of this proposal.

Very truly yours,

Austin L. Temple Jr., Ph.D.
Dean, College of Science and Technology