

Office of the Bids and Awards Committee Telephone No.: (+63 32) 254 1452 local 141 or 125 Email: <u>cnubacsed@gmail.com</u> Website: <u>www.cnu.edu.ph</u>



PROCUREMENT	:	Procurement of 1 Lot 3D Printed Anatomy Models; 1 Lot 3D Anatomy Software; 1 Lot Virtual Reality Clinic Laboratory and Virtual Reality Augmented Reality for Maternal-Fetal Birthing Simulator; 1 Lot CPR Trainer; 1 Lot Physiology Teaching System; and 1 Lot Chest Drain & Needle Decompression Trainer
BID NO	:	24-10-310
LOCATION	:	Cebu Normal University Osmeña Boulevard, Cebu City
OWNER	:	Cebu Normal University
SUBJECT	:	Bid Bulletin No. 1
DATE	:	October 22, 2024

This Bid Bulletin is to amend/clarify the following requirements as reflected in the Invitation to Bid/Bidding Documents.

ITEM DES	CRIPTION
FROM	ТО
Title:	Title:
Procurement of 1 Lot 3D Printed Anatomy	Procurement of 1 Lot 3D Printed Anatomy
Models and 3D Anatomy Software; 1 Lot	Models; 1 Lot 3D Anatomy Software; 1 Lot
Virtual Reality Clinic Laboratory and Virtual	Virtual Reality Clinic Laboratory and Virtual
Reality Augmented Reality for Maternal-Fetal	Reality Augmented Reality for Maternal-Fetal
Birthing Simulator; 1 Lot CPR Trainer; 1 Lot	Birthing Simulator; 1 Lot CPR Trainer; 1 Lot
Physiology Teaching System; and 1 Lot Chest	Physiology Teaching System; and 1 Lot Chest
Drain & Needle Decompression Trainer with	Drain & Needle Decompression Trainer with
Bid No. 24-10-310	Bid No. 24-10-310
Invitation to Bid for the Procurement of 1 Lot	Invitation to Bid for the Procurement of 1 Lot
3D Printed Anatomy Models and 3D Anatomy	3D Printed Anatomy Models; 1 Lot 3D
Software; 1 Lot Virtual Reality Clinic	Anatomy Software; 1 Lot Virtual Reality Clinic
Laboratory and Virtual Reality Augmented	Laboratory and Virtual Reality Augmented
Reality for Maternal-Fetal Birthing Simulator;	Reality for Maternal-Fetal Birthing Simulator;
1 Lot CPR Trainer; 1 Lot Physiology Teaching	1 Lot CPR Trainer; 1 Lot Physiology Teaching
System; and 1 Lot Chest Drain & Needle	System; and 1 Lot Chest Drain & Needle
Decompression Trainer with Bid No. 24-10-	Decompression Trainer with Bid No. 24-10-
310	310













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ITB Item No. 1:

ITB Item No. 1:

1. The Cebu Normal University, through the CHED SUC SEED FUND (MTF-LBP), intends to apply the sum of Thirty-Five Million Pesos (*Php35,000,000.00*) being the ABC to payments under the contract for the Procurement of 1 Lot 3D Printed Anatomy Models and 3D Anatomy Software; 1 Lot Virtual Reality Clinic Laboratory and Virtual Reality Augmented Reality for Maternal-Fetal Birthing Simulator: 1 Lot CPR Trainer: 1 Lot Physiology Teaching System; and 1 Lot Chest Drain & Needle Decompression Trainer with Bid No. 24-10-310. Bids received in excess of the ABC shall be automatically rejected at bid opening.

1. **Scope of Bid**

The Procuring Entity, Cebu Normal University wishes to receive Bids for the 1 Lot 3D Printed Anatomy Models and 3D Anatomy Software; 1 Lot Virtual Reality Clinic Laboratory and Virtual Reality Augmented Reality for Maternal-Fetal Birthing Simulator; 1 Lot CPR Trainer; 1 Lot Physiology Teaching System; and 1 Lot Chest Drain & Needle Decompression Trainer, with identification number 24-10-310.

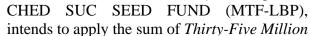
The Procurement Project (referred to herein as "Project") is composed of **FIVE** (5) **LOTS**, the details of which are described in Section VII (Technical Specifications).

Bid Data Sheet - ITB Clause 19.3 Procurement of 1 Lot 3D Printed Anatomy Models and 3D Anatomy Software, 1 lot Virtual Reality Clinic Laboratory and Virtual Reality





VURI



intends to apply the sum of Thirty-Five Million Pesos (Php35,000,000.00) being the ABC to payments under the contract for the Procurement of 1 Lot 3D Printed Anatomy Models; 1 Lot 3D Anatomy Software; 1 Lot Virtual Reality Clinic Laboratory and Virtual Reality Augmented Reality for Maternal-Fetal Birthing Simulator; 1 Lot CPR Trainer; 1 Lot Physiology Teaching System; and 1 Lot Chest Drain & Needle Decompression Trainer with Bid No. 24-10-310. Bids received in excess of the ABC shall be automatically rejected at bid opening.

The Cebu Normal University, through the

1. **Scope of Bid**

The Procuring Entity, Cebu Normal University wishes to receive Bids for the 1 Lot 3D Printed Anatomy Models; 1 Lot Anatomy Software; 1 Lot Virtual Reality Clinic Laboratory and Virtual Reality Augmented Reality for Maternal-Fetal Birthing Simulator; 1 Lot CPR Trainer; 1 Lot Physiology Teaching System; and 1 Lot Chest Drain & Needle Decompression Trainer, with identification number 24-10-310.

The Procurement Project (referred to herein as "Project") is composed of SIX (6) LOTS, the details of which are described in Section VII (Technical Specifications).

Bid Data Sheet - ITB Clause 19.3

Procurement of 1 Lot 3D Printed Anatomy Models; 1 Lot 3D Anatomy Software, 1 lot Virtual Reality Clinic Laboratory and Virtual Reality Augmented Reality for Maternal-Fetal







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Augmented Reality for Maternal-Fetal Birthing Simulator, 1 lot CPR Trainer; 1 lot Physiology Teaching System, and 1 lot Chest Drain & Needle Decompression Trainer amounting to Thirty-Five Million Pesos (Php35,000,000.00)

Birthing Simulator, 1 lot CPR Trainer; 1 lot Physiology Teaching System, and 1 lot Chest Drain & Needle Decompression Trainer amounting to Thirty-Five Million Pesos (Php35,000,000.00)

ITEM NO.	Qty.	Unit	Item Description
1	1	L	1 Lot 3D PRINTED
		O T	ANATOMY MODELS
		1	AND 3D ANATOMY SOFTWARE
1.1	1	U	1 Lot 3D PRINTED
		nit	ANATOMY MODELS
			Deep upper limb and
			hand
			This 3D print of a
			superficially dissected
			right upper limb specimen
			displays a mixture of the
			vascular, nervous, and
			muscular anatomy of the
			distal arm, forearm, and
1.2	1	TT	hand.
1.2	1	U	Foot - Plantar surface &
		nit	superficial dissection on the dorsum
			This 3D printed specimen
			is a left foot with
			superficial structures
			exposed on the dorsum,
			and the superficial layer
			of muscles and nerves on
			the plantar surface. The
			anterior portion of the
			plantar aponeurosis has
			largely been removed to
			expose the first layer of
			muscles
1.3	1	U	Lower Limb - deep
		nit	dissection
			This 3D printed specimen
			consists of a right partial
			lower limb sectioned just
			proximal to the knee joint
			and complete through a
			partially dissected foot
			exposing the structures on
			the dorsum.

ITEM NO.	Qty.	Unit	Item Description
1	1	L O T	1 Lot 3D PRINTED ANATOMY MODELS
1.1	1	U nit	1 Lot 3D PRINTED ANATOMY MODELS
			Deep upper limb and hand This 3D print of a superficially dissected right upper limb specimen displays a mixture of the vascular, nervous, and muscular anatomy of the distal arm, forearm, and hand.
1.2	1	Unit	Foot - Plantar surface & superficial dissection on the dorsum This 3D printed specimen is a left foot with superficial structures exposed on the dorsum, and the superficial layer of muscles and nerves on the plantar surface. The anterior portion of the plantar aponeurosis has largely been removed to expose the first layer of muscles
1.3	1	U nit	Lower Limb - deep dissection This 3D printed specimen consists of a right partial lower limb sectioned just proximal to the knee joint and complete through a partially dissected foot exposing the structures on the dorsum.















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1.4	1	U	Popliteal Fossa distal	1.4	1	U	Popliteal Fossa distal	
		nit	thigh and proximal leg			nit	thigh and proximal leg	
			This 3D printed specimen				This 3D printed specimen	
			preserves the distal thigh				preserves the distal thigh	
			and proximal leg,				and proximal leg,	
			dissected posteriorly to				dissected posteriorly to	
			demonstrate the contents				demonstrate the contents	
			of the popliteal fossa and				of the popliteal fossa and	
			surrounding region.				surrounding region.	
1.5	1	U	Knee Joint, flexed	1.5	1	U	Knee Joint, flexed	
		nit	This 3D printed specimen			nit	This 3D printed specimen	
			demonstrates the				demonstrates the	
			ligaments of the knee				ligaments of the knee	
			joint with the leg in				joint with the leg in	
			flexion. In the anterior				flexion. In the anterior	
			view, with the patella and				view, with the patella and	
			part of the patellar				part of the patellar	
			ligament removed, the				ligament removed, the	
			medial and lateral menisci				medial and lateral menisci	
			and anterior and posterior				and anterior and posterior	
			cruciate ligaments are				cruciate ligaments are	
			visible.				visible.	
1.6	1	U	Female right pelvis	1.6	1	U	Female right pelvis	
		nit	superficial and deep			nit	superficial and deep	
			structures				structures	
			This 3D printed female				This 3D printed female	
			right pelvis preserves both				right pelvis preserves both	
			superficial and deep				superficial and deep	
			structures of the true and				structures of the true and	
			false pelvis, as well as the				false pelvis, as well as the	
			inguinal ligament, the				inguinal ligament, the	
			obturator membrane and				obturator membrane and	
			canal, and both the greater				canal, and both the greater	
			and lesser sciatic				and lesser sciatic	
			foramina. Somewhat				foramina. Somewhat	
			unique is the removal of				unique is the removal of	
			portions of the				portions of the	
			peritoneum (a grayish				peritoneum (a grayish	
			color) to create 'windows'				color) to create 'windows'	
			displaying extraperitoneal				displaying extraperitoneal	
11			structures				structures	









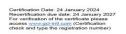




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1.7	1	U	Heart internal	1.7	1	U	Heart internal
	.	nit	structures			nit	structures
			This 3D printed heart has				This 3D printed heart has
			been dissected to display				been dissected to display
			the internal structures of				the internal structures of
			the chambers. At the base				the chambers. At the base
			of the heart the				of the heart the
			termination of the				termination of the
			superior vena cava is				superior vena cava is
			preserved entering the				preserved entering the
			right atrium. Part of the				right atrium. Part of the
			inferior vena cava is also				inferior vena cava is also
			preserved on the inferior				preserved on the inferior
			aspect of the right atrium;				aspect of the right atrium;
			however, most of the				however, most of the
			vessel lumen and much of				vessel lumen and much of
			the anterior wall has been				the anterior wall has been
			removed to expose the				removed to expose the
			pectinate muscles of the				pectinate muscles of the
			right auricle and the fossa	1			right auricle and the fossa
			ovalis (which is nearly				ovalis (which is nearly
			translucent in the 3D	1			translucent in the 3D
			print). The anterior wall				
			± /				print). The anterior wall
			of the right ventricle has also been removed to				of the right ventricle has also been removed to
			expose the right atrioventricular valve and				expose the right atrioventricular valve and
			its three cusps (anterior,				its three cusps (anterior,
			posterior, and septal),				posterior, and septal),
			including the chordae				including the chordae
			tendineae connecting				tendineae connecting
			them to respective				them to respective
			papillary muscles				papillary muscles
			projecting from				projecting from
			trabeculae carneae				trabeculae carneae
			(including a				(including a
			septomarginal trabecula				septomarginal trabecula
			entering the anterior				entering the anterior
			papillary muscle from the	1			papillary muscle from the
			interventricular septum).	4.0			interventricular septum).
1.8	1	U	Circle of Willis	1.8	1	U	Circle of Willis
		nit	This 3D printed specimen			nit	This 3D printed specimen
			demonstrates the	1			demonstrates the
			intracranial arteries that				intracranial arteries that
			supply the brain relative				supply the brain relative
			to the inferior portions of				to the inferior portions of
			the 1 Unit P 288,000.00 5	1			the 1 Unit P 288,000.00 5
			P a g e viscero- and				P a g e viscero- and
			neurocranium. This print				neurocranium. This print
			was created by careful				was created by careful
			segmentation of				segmentation of
			angiographic data. The	1			angiographic data. The
			model shows the paired	1			model shows the paired
			vertebral arteries entering				vertebral arteries entering
			the cranial cavity through				the cranial cavity through
			the foramen magnum and				the foramen magnum and

















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			uniting to form the basilar artery. The basilar can be seen dividing into their terminal posterior cerebral arteries. The superior cerebellar arteries arise just proximal to this termination.				uniting to form the basilar artery. The basilar can be seen dividing into their terminal posterior cerebral arteries. The superior cerebellar arteries arise just proximal to this termination.	
1.9	1	U nit	Median Section through head sagittal section of head with deep dissection This 3D model combines a midsagittal section of the head with preservation of brain and cranial cavity anatomy, with a unique deep dissection of the pharyngeal region via removal of basicranial bone and the anterior parts of the atlas and axis. As the opposing side is undissected it has been digitally eliminated from the model.	1.9	1	Unit	Median Section through head sagittal section of head with deep dissection This 3D model combines a midsagittal section of the head with preservation of brain and cranial cavity anatomy, with a unique deep dissection of the pharyngeal region via removal of basicranial bone and the anterior parts of the atlas and axis. As the opposing side is undissected it has been digitally eliminated from the model.	
1.10	1	U	Thorax with heart and	1.10	1	U	Thorax with heart and	
		nit	vessels The superior thoracic aperture contains structures emerging from the thorax and entering the based and nearly and			nit	vessels The superior thoracic aperture contains structures emerging from the thorax and entering	
			the head and neck and upper limb. In this specimen, both clavicles, key venous structures and other musculature have been removed. Despite this, other important components of anatomy can be observed. Key structures include the Trachea seen most superiorly with a thick ring of cartilage, rib one has been exposed prior to meeting its costal cartilage, travelling in a lateral to medial direction and the anterior scalene muscle inserting into Rib one superiorly.				the head and neck and upper limb. In this specimen, both clavicles, key venous structures and other musculature have been removed. Despite this, other important components of anatomy can be observed. Key structures include the Trachea seen most superiorly with a thick ring of cartilage, rib one has been exposed prior to meeting its costal cartilage, travelling in a lateral to medial direction and the anterior scalene muscle inserting into Rib one superiorly.	















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1.12	1	U nit	Hilum of the left lung	1.12	1	U nit	Hilum of the left lung	
1.13	1	U	Hilum of the right lung	1.13	1	U	Hilum of the right lung	
		nit	The hilum of a lung is the			nit	The hilum of a lung is the	
			point at which visceral				point at which visceral	
			and parietal pleura meet				and parietal pleura meet	
			and functions with the				and functions with the	
			pulmonary ligament as				pulmonary ligament as	
			the lungs only connection				the lungs only connection	
			with the rest of the body.				with the rest of the body.	
			This connection includes				This connection includes	
			the Pulmonary Artery,				the Pulmonary Artery,	
			Superior and Inferior				Superior and Inferior	
			Pulmonary Veins, Main				Pulmonary Veins, Main	
			Bronchi, Nerves and				Bronchi, Nerves and	
			Lymphatics.				Lymphatics.	
1.14	1	U	Abdomen with bilateral	1.14	1	U	Abdomen with bilateral	
		nit	Hernias			nit	Hernias	
			This 3D model represents				This 3D model represents	
			one of the largest and				one of the largest and	
			most complex in the				most complex in the	
			series, consisting of a				series, consisting of a	
			partial torso from the				partial torso from the	
			diaphragm to the				diaphragm to the	
			proximal thigh with a				proximal thigh with a	
			complete abdominal				complete abdominal	
			cavity preserving varying levels of dissection. This				cavity preserving varying levels of dissection. This	
			3D model also records the				3D model also records the	
			rare, simultaneous occurrence of indirect and				rare, simultaneous occurrence of indirect and	
			direct inguinal hernias				direct inguinal hernias	
			allowing for consideration				allowing for consideration	
			of the anatomical				of the anatomical	
			underpinnings for both				underpinnings for both	
			conditions. Given the				conditions. Given the	
			scale of the dissection this				scale of the dissection this	
			3D model description is				3D model description is	
			divided into discrete parts				divided into discrete parts	
			based on views and				based on views and	
			regions.				regions.	
1.1	1	U	Vasculature of the	1.1	1	U	Vasculature of the	
5		nit	spleen	5		nit	spleen	
			At the splenic hilum, the				At the splenic hilum, the	
			splenic artery and vein				splenic artery and vein	
			can be seen entering the				can be seen entering the	
			spleen to supply and drain				spleen to supply and drain	
			the organ. The opening of				the organ. The opening of	
			the splenic vein has been				the splenic vein has been	
			kept patent by the				kept patent by the	
			insertion of silicon tubing				insertion of silicon tubing	
			in the model. This model				in the model. This model	
			shows the most superior				shows the most superior	
			branch of the splenic vein				branch of the splenic vein	
			has been sectioned from				has been sectioned from	
			its normal passage into				its normal passage into	















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			the spleen. The "tortuous" of twisted shape of the splenic artery can be appreciated as it branches at the hilum. This reflects the overall curled and twisted shape of the vessel across its course from the coeliac trunk to the spleen.				the spleen. The "tortuous" of twisted shape of the splenic artery can be appreciated as it branches at the hilum. This reflects the overall curled and twisted shape of the vessel across its course from the coeliac trunk to the spleen.	
1.1 6	1	Unit	Stomach This 3D model is an isolated stomach with two dissection windows to expose the rugae and pylorus. A small portion of the terminal esophagus is preserved at the cardiac region, and a small portion of the proximal duodenum beyond the pyloric sphincter. The large window within the body of the stomach allows for a clear view into the fundus and the well-developed rugae on the posterior aspect of the wall of the organ. The smaller window, opened just at the pyloric region, allows for an appreciation of the thickening of the organ wall at the pyloric sphincter just proximal to the start of the duodenum.	1.1 6	1	Unit	Stomach This 3D model is an isolated stomach with two dissection windows to expose the rugae and pylorus. A small portion of the terminal esophagus is preserved at the cardiac region, and a small portion of the proximal duodenum beyond the pyloric sphincter. The large window within the body of the stomach allows for a clear view into the fundus and the well-developed rugae on the posterior aspect of the wall of the organ. The smaller window, opened just at the pyloric region, allows for an appreciation of the thickening of the organ wall at the pyloric sphincter just proximal to the start of the duodenum.	
1.1 7	1	U nit	Spleen and pancreas This 3D model preserve the deep foregut organs: the descending, horizontal and ascending duodenum, the pancreas, and the spleen.	1.1 7	1	U nit	Spleen and pancreas This 3D model preserve the deep foregut organs: the descending, horizontal and ascending duodenum, the pancreas, and the spleen.	













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Π	1.1	1	U	Liver with vessels and	1.1	1	U	Liver with vessels and
	8		nit	gallbladder	8		nit	gallbladder
				The size and shape of this				The size and shape of this
				specimen varies				specimen varies
				somewhat from a typical				somewhat from a typical
				liver. It is less wedge-				liver. It is less wedge-
				shaped and longer in the				shaped and longer in the
				super inferior dimension				super inferior dimension
				(on the posterior view this				(on the posterior view this
				would translate to a				would translate to a
				greater vertical height).				greater vertical height).
				Normally, a liver is less				Normally, a liver is less
				than 16cm in the				than 16cm in the
				midclavicular line.1 This				midclavicular line.1 This
				specimen measures				specimen measures
				approximately 18cm in				approximately 18cm in
				the midclavicular line,				the midclavicular line,
				suggesting some degree				suggesting some degree
				of hepatomegaly.				of hepatomegaly.
				However, it is worth				However, it is worth
				mentioning that some				mentioning that some
				measurement distortion				measurement distortion
				may have occurred based				may have occurred based
				on the fixing and curation				on the fixing and curation
				of the specimen – and it				of the specimen – and it
				must be noted that the				must be noted that the
				accuracy of estimating				accuracy of estimating
				liver size using a single				liver size using a single
				parameter is limited.				parameter is limited.
				Liver measurements				Liver measurements
				diagnostic of				diagnostic of
				hepatomegaly vary				hepatomegaly vary
				depending on normal				depending on normal
				anatomical variation in				anatomical variation in
				liver size and				liver size and
				morphology, the method				morphology, the method
				of measurement, and				of measurement, and
				patient features such as				patient features such as
				sex and BMI.				sex and BMI.
	1.1	1	U	Female hemipelvis and	1.1	1	U	Female hemipelvis and
	9		nit	thigh	9		nit	thigh
				This 3D model preserves				This 3D model preserves
				a left pelvis divided at the				a left pelvis divided at the
				midsagittal plane, and the				midsagittal plane, and the
				proximal thigh to				proximal thigh to
				approximately the				approximately the
				midthigh.				midthigh.
				č				č
						1	1	













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		*Warranty: One (1) year				*Warranty: One (1) year	
		on parts and services				on parts and services	
		I				I	
		■ Certificate of				■ Certificate of	
		authorized distributorship				authorized distributorship	
		of the bidder issued by the				of the bidder issued by the	
		manufacturer.				manufacturer.	
		■ Certificate from the				■ Certificate from the	
		manufacturer that the 3D				manufacturer that the 3D	
		Printed Products are ab				Printed Products are ab	
		accurate representation of				accurate representation of	
		real human anatomy and				real human anatomy and	
		are based on imaging				are based on imaging	
		scanning data of real				scanning data of real	
		human specimen provided				human specimen provided	
		by one of the top 20				by one of the top 20	
		university worlds ranking				university worlds ranking	
		in anatomy, ranked by QS				in anatomy, ranked by QS	
		World University				World University	
		Ranking for Anatomy and				Ranking for Anatomy and	
		Physiology via its				Physiology via its	
		website.				website.	
		■ Certificate from the				■ Certificate from the	
		manufacturer that the 3D				manufacturer that the 3D	
		printed anatomy models				printed anatomy models	
		are made of photopolymer				are made of photopolymer	
		resin.				resin.	
		■ Certificate of				■ Certificate of	
		manufacturer's ISO				manufacturer's ISO	
		certificate				certificate	
		■There must be at least				■There must be at least	
		one demo unit from the				one demo unit from the	
		list of 3D printed anatomy				list of 3D printed anatomy	
		models as sample.				models as sample.	
						LOT 1 TOTAL ABC:	
1.2 2	Se	3D ANATOMY				Php6,805,200.00	
$\begin{vmatrix} 1.2 \\ 0 \end{vmatrix}$	t	SOFTWARE				1 LOT 3D ANATOMY	
					G	SOFTWARE	
			2	2	Se	3D ANATOMY	
					t	SOFTWARE	















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3D Anatomy Software,		3D Anatomy Software,	
including at least 14" i5		including at least 14" i5	
touchscreen laptop and		touchscreen laptop and	
at least 65" ViewSonic		at least 65" ViewSonic	
interactive digital		interactive digital	
whiteboard		whiteboard	
The 3D Anatomy		The 3D Anatomy	
Software is a collection of		Software is a collection of	
at least 300 advanced		at least 300 advanced	
digital images of real		digital images of real	
Plastinated specimens of		Plastinated specimens of	
each human body region		each human body region	
dissected in various		dissected in various	
quantities. High-precision		quantities. High-precision	
reconstruction technology		reconstruction technology	
was employed in its		was employed in its	
development. It serves as		development. It serves as	
a valuable and engaging		a valuable and engaging	
teaching tool for human		teaching tool for human	
anatomy education,		anatomy education,	
facilitating effective class		facilitating effective class	
lectures and discussions,		lectures and discussions,	
serving as a learning		serving as a learning	
resource, and supporting		resource, and supporting	
pop quizzes and pre-exam		pop quizzes and pre-exam	
preparation.		preparation.	
The 3D Anatomy		The 3D Anatomy	
Software can be used for		Software can be used for	
anatomy lectures in the		anatomy lectures in the	
class, and can be used as a		class, and can be used as a	
dissection guide for a big		dissection guide for a big	
group of students in the		group of students in the	
anatomy laboratory.		anatomy laboratory.	
The 3D Anatomy		The 3D Anatomy	
Software is an offline		Software is an offline	
based software allowing it		based software allowing it	
to be used anytime.		to be used anytime.	
During classroom		During classroom	
lectures, the instructor		lectures, the instructor	
controls the software from		controls the software from	
the laptop/from the		the laptop/from the	
Interactive Digital Board,		Interactive Digital Board,	
while students listen and		while students listen and	
learn as the image is		learn as the image is	
shared in a large or		shared in a large or	
multiple TV screen/s or		multiple TV screen/s or	
projector for larger image.		projector for larger image.	
Note: The 3D Anatomy		Note: The 3D Anatomy	
Software should have no		Software should have no	
yearly subscriptions,		yearly subscriptions,	
and must include free		and must include free	
lifetime software		lifetime software	
updates.		updates.	
LOT 1 TOTAL ABC:		LOT 2 TOTAL ABC:	
Php11,305,200.00		Php4,500,000.00	
• / /		· / / ····	

















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)	1	L	VIRTUAL REALITY	3.0	1	L	VIRTUAL REALITY
		0	CLINIC			0	CLINIC
		Т	LABORATORY AND			Т	LABORATORY AND
			VIRTUAL REALITY				VIRTUAL REALITY
			AUGMENTED				AUGMENTED
			REALITY FOR				REALITY FOR
			MATERNAL-FETAL				MATERNAL-FETAL
			BIRTHING				BIRTHING
			SIMULATOR				SIMULATOR
F	2	U	Virtual Reality Clinic	3.1	2	U	Virtual Reality Clinic
		nit	Laboratory			nit	Laboratory
			This is an advanced,				This is an advanced,
			affordable, and				affordable, and
			revolutionary virtual				revolutionary virtual
			reality medical training				reality medical training
			solution.				solution.
			Learn and develop				Learn and develop
			medical diagnostic skills				medical diagnostic skills
			with high resolution				with high resolution
			graphics that are engaging				graphics that are engaging
			and truly immersive.				and truly immersive.
			Virtual patients differ in				Virtual patients differ in
			age and gender and				age and gender and
			answer different medical				answer different medical
			questions which gives the				questions which gives the
			user the chance to analyze				user the chance to analyze
			and make conclusions				and make conclusions
			about possible diagnosis.				about possible diagnosis.
			Learners can develop				Learners can develop
			critical skills to				critical skills to
			effectively diagnose				effectively diagnose
			illnesses using a wide				illnesses using a wide
			variety of medical				variety of medical
			instruments, medicines,				instruments, medicines,
			and laboratory tests in a				and laboratory tests in a
			safe, controlled				safe, controlled
			environment with session				environment with session
			monitoring in real time.				monitoring in real time.
			 Industry-leading 				 Industry-leading
			graphics				graphics
			 Minimum space needed 				 Minimum space needed
			for use is 4 sq. ft.				for use is 4 sq. ft.
			 Unique teleportation 				 Unique teleportation
			feature inside VR section				feature inside VR section
			 Fastest setup, load and 				 Fastest setup, load and
			response time				response time
			Smart Center with				• Smart Center with
			Spectator feature for				Spectator feature for
			managing and tracking				managing and tracking
			training		[1	training













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			Includes	гг	1			Includes	
			Includes: • VR Goggles,					Includes: • VR Goggles,	
			VR Goggles,Laptop Computer,					VR Goggles,Laptop Computer,	
			• 65" Flat Panel Display					• 65" Flat Panel Display	
			with Stand,					with Stand,	
			Clinic Software w/					Clinic Software w/	
			Lifetime License					Lifetime License	
			• 200+ outpatient cases					• 200+ outpatient cases	
			Access to Smart Center					Access to Smart Center	
			– web service monitoring					- web service monitoring	
			and recording training					and recording training	
			sessions with tracking					sessions with tracking	
			learning outcomes,					learning outcomes,	
			learning progress,					learning progress,	
			registering students					registering students	
			Case Manager –					Case Manager –	
			outpatient case					outpatient case	
			editing/creation – up to 30					editing/creation – up to 30	
			cases (license for 12					cases (license for 12	
			months)					months)	
			VR Headset Specs:					VR Headset Specs:	
			Head Strap					Head Strap	
			Soft Strap					Soft Strap	
			Designed to offer					Designed to offer	
			lightweight comfort for					lightweight comfort for	
			any type of player. This					any type of player. This	
			soft strap can be easily					soft strap can be easily	
			adjusted or upgraded with					adjusted or upgraded with	
			Meta Quest accessories.					Meta Quest accessories.	
			Optics					Optics	
			Specifications					Specifications	
			Fast-Switch LCD Display					Fast-Switch LCD Display	
			1832 x 1920 Resolution					1832 x 1920 Resolution	
			Per Eye					Per Eye	
			60, 72, 90 Hz Refresh					60, 72, 90 Hz Refresh	
			Rate Supported Glasses Compatible					Rate Supported Glasses Compatible	
			o with certificate of					o with certificate of	
			exclusivity from the					exclusivity from the	
			manufacturer					manufacturer	
			*With Trainings					*With Trainings	
2.2	1	U	Virtual Reality		3.2	1	U	Virtual Reality	
		nit	Augmented Reality for				nit	Augmented Reality for	
			Maternal-Fetal Birthing					Maternal-Fetal Birthing	
			Simulator					Simulator	
			This is a wireless birthing					This is a wireless birthing	
	1		simulator with validated					simulator with validated	
			and integrated maternal-					and integrated maternal-	
			fetal physiology and					fetal physiology and	
			interchangeable static					interchangeable static	
			collars to train on all					collars to train on all	
			stages of delivery and the					stages of delivery and the	
11	1	1	rare emergency scenario.		1			rare emergency scenario.	
11			The children genery section is					rare emergency sechario.	













BAGONG PILIPINAS

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		Elevete accustel training	
Elevate neonatal training		Elevate neonatal training	
with augmented reality, a		with augmented reality, a	
solution that helps		solution that helps	
learners truly visualize		learners truly visualize	
childbirth and accelerates		childbirth and accelerates	
neonatal training. It can		neonatal training. It can	
be used as a standalone		be used as a standalone	
application with a		application with a	
holographic manikin or		holographic manikin or	
can be integrated with the		can be integrated with the	
manikin to enable		manikin to enable	
continuum of learning.		continuum of learning.	
Accelerate learning and		Accelerate learning and	
retention with a complete		retention with a complete	
understanding of		understanding of	
physiology in childbirth		_	
1 0 00		physiology in childbirth	
and postpartum scenarios		and postpartum scenarios	
• Improve skills retention		• Improve skills retention	
with self-paced and		with self-paced and	
repeatable learning		repeatable learning	
 Save precious faculty 		 Save precious faculty 	
time with self-directed		time with self-directed	
learning		learning	
 Deliver training with 		 Deliver training with 	
minimal space		minimal space	
requirements the world's		requirements the world's	
first childbirth simulator		first childbirth simulator	
to offer real-time,		to offer real-time,	
interactive 3D holograms		interactive 3D holograms	
of anatomy for more		of anatomy for more	
immersive training.		immersive training.	
e de la constance de		6	
With 5 Scenarios:		With 5 Scenarios:	
Normal Delivery		Normal Delivery	
Breech Delivery		Breech Delivery	
Shoulder Dystocia		Shoulder Dystocia	
•		-	
Delivery		Delivery	
Instrumental Delivery		Instrumental Delivery	
Postpartum Hemorrhage *Postpartum 19 51/ 222001		• Postpartum Hemorrhage	
*Batteries: 18.5V, 233Wh		*Batteries: 18.5V, 233Wh	
Lithium Ion		Lithium Ion	
For additional		For additional	
interactivity, students can		interactivity, students can	
use HoloLens to elevate		use HoloLens to elevate	
3D models above the		3D models above the	
physical model and		physical model and	
bypass them. Although it		bypass them. Although it	
is designed to work with		is designed to work with	
the physical simulator,		the physical simulator,	
this also allows students		this also allows students	
to train only with		to train only with	
HoloLens.		HoloLens.	
		1	











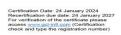




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This brings an impressive		This brings an impressive	
mix of features to the		mix of features to the	
market, including a more		market, including a more	
realistic and controllable		realistic and controllable	
birthing process, better		birthing process, better	
articulation for labor and		articulation for labor and	
delivery maneuvers, and		delivery maneuvers, and	
predicts APGAR scores		predicts APGAR scores	
based on integrated		based on integrated	
maternal and fetal		maternal and fetal	
physiology. From normal		physiology. From normal	
delivery and breech birth		delivery and breech birth	
to shoulder dystocia and		to shoulder dystocia and	
eclampsia, Lucina does it		eclampsia, Lucina does it	
all.		all.	
1. The advanced delivery		1. The advanced delivery	
mechanism is reliable and		mechanism is reliable and	
stable and it is the quietest		stable and it is the quietest	
on the market Tactile		on the market Tactile	
realism of mother and		realism of mother and	
fetus allows learners to		fetus allows learners to	
establish stages of labor,		establish stages of labor,	
_		_	
determine delivery cases		determine delivery cases	
by seat and perform more		by seat and perform more	
interventions, including		interventions, including	
extraction using a suction		extraction using a suction	
cup		cup	
2. Full waist, hip and		2. Full waist, hip and	
-		thigh joint with visible	
thigh joint with visible		pelvic joint allows	
pelvic joint allows		practice of obstetric	
practice of obstetric		1	
maneuvers including		maneuvers including McRobert maneuver	
McRobert maneuver			
Advanced		Advanced	
cardiopulmonary		cardiopulmonary	
resuscitation analysis		resuscitation analysis	
measures quality and		measures quality and	
depth of chest		depth of chest	
compressions, ventilation		compressions, ventilation	
speed and volume,		speed and volume,	
cardiac output and more		cardiac output and more	
Signs of epileptic seizures		Signs of epileptic seizures	
in the mother include		in the mother include	
tremor, rapid blinking of		tremor, rapid blinking of	
the eyes, jaw movement		the eyes, jaw movement	
and stertorous breathing		and stertorous breathing	
3. Postpartum hemorrhage		3. Postpartum hemorrhage	
reservoir holds blood to		reservoir holds blood to	
exercise for a wide range		exercise for a wide range	
of scenarios including		of scenarios including	
class III hemorrhage		class III hemorrhage	
Extraction of the placenta		Extraction of the placenta	
with detection of the		with detection of the	
appropriate level of force		appropriate level of force	
· · ·			

















Office of the Bids and Awards Committee Telephone No : (+63 32) 254 1452 local 141 or 125

3.1	1	U nit	CPR Trainer (Set of 5 plus 5 tablet computers)	4.1	1	U nit	CPR Trainer (Set of 5 plus 5 tablet computers)
3.0	1	L O T	CPR TRAINER	4.0	1	L O T	CPR TRAINER
		1	r ,,,			1	r , ,-oo,ooooo
			Php9,100,000.00				Php9,100,000.00
			LOT 2 TOTAL ABC:				LOT 3 TOTAL ABC:
			*With Trainings				*With Trainings
			the cervix.				the cervix.
			dilation and effacement of				dilation and effacement of
			realism includes proper				realism includes proper
			massage Maternal tactile				massage Maternal tactile
			Zavanelli and uterine				Zavanelli and uterine
			pressure, pressure maneuvers. Rubin II,				pressure, pressure maneuvers. Rubin II,
			maneuver, suprapubic				maneuver, suprapubic
			lateral tilt, McRoberts				lateral tilt, McRoberts
			measurement of left				measurement of left
			detection, response and				detection, response and
			newborn baby Automatic				newborn baby Automatic
			standards for a term				standards for a term
			Organization (WHO)				Organization (WHO)
			World Health				World Health
			4. The fetus must meet				4. The fetus must meet
			and five minutes				and five minutes
			scores after one minute				scores after one minute
			wailing and APGAR				wailing and APGAR
			healthy delivery include				healthy delivery include
			for extraction Signs of "a				for extraction Signs of "a













Office of the Bids and Awards Committee

<u> </u>		
	• LED Display for real-	• LED Display for real-
	time feedback (Chest	time feedback (Chest
	compression, Ventilation)	compression, Ventilation)
	Chest compression –	• Chest compression –
	Total number, Good	Total number, Good
	number, Depth, Speed,	number, Depth, Speed,
	Incomplete recoil, Hand	Incomplete recoil, Hand
	position	position
	Ventilation – Total	Ventilation – Total
	number, Good number,	number, Good number,
	Volume, Rate	Volume, Rate
	Sound, LED ON / OFF	Sound, LED ON / OFF
	Head tilt-Chin lift	Head tilt-Chin lift
	Maneuver, Airway	Maneuver, Airway
	opening	opening
	Visible Chest rising	Visible Chest rising
	during ventilation	during ventilation
	• Semi-permanent use of	• Semi-permanent use of
	AED training pads with	AED training pads with
	embedded magnets in	embedded magnets in
	manikin (Offering	manikin (Offering
	magnetic stickers)	magnetic stickers)
	SOFTWARE	SOFTWARE
	Preloaded into Tablet	Preloaded into Tablet
	Computer	Computer
	• Connect up to 6	• Connect up to 6
	manikins at the same time	manikins at the same time
	Editable guidelines	Editable guidelines
	Various Training	Various Training modes:
	modes: Game mode,	Game mode, Training
	Training mode,	mode, Evaluation mode
	Evaluation mode	Training for Chest
	Training for Chest	Compression and
	Compression and	Ventilation · Count Total
	Ventilation · Count Total	Number and Correct
	Number and Correct	Number of Compressions
	Number of Compressions	Count Total volume and
	Count Total volume and	number of ventilations
	number of ventilations	Assessment results
	Assessment results	exportable
	• Assessment results exportable	
	LOT 3 TOTAL ABC:	LOT 4 TOTAL ABC:
		Php1,950,000.00
	Php1,950,000.00	















Office of the Bids and Awards Committee

4.0 1	L O T	PHYSIOLOGY TEACHING SYSTEM	5.0	1	L O T	PHYSIOLOGY TEACHING SYSTEM
1.1 4	Unit	Physiology Teaching System A system for the teaching of human and animal physiology Includes at least 90 experiments and at least 250 exercises in cardiovascular, neuromuscular and spirometric physiology, and others. Also include: Control Module with wire compatible Biopotential (ECG, EMG, EEG, GSR) Amplifier, Built-in Stimulator Spirometer Flow Head, Heart Sounds Sensor 1 Unit Iron Stand 1 Unit Spirometer Collapsible Tubing 10 pieces Spirometer Mouthpiece	5.1	4	Unit	Physiology Teaching System A system for the teaching of human and animal physiology Includes at least 90 experiments and at least 250 exercises in cardiovascular, neuromuscular and spirometric physiology, and others. Also include: • Control Module with wire compatible Biopotential (ECG, EMG, EEG, GSR) Amplifier, Built-in Stimulator • Spirometer Flow Head, Heart Sounds Sensor • 1 Unit Iron Stand • 1 Unit Spirometer Collapsible Tubing • 10 pieces Spirometer Mouthpiece









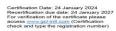




Office of the Bids and Awards Committee

- Dulas Droho	- Dulas Droha
Pulse Probe, Terror Server	■ Pulse Probe,
Temperature Sensor	Temperature Sensor
■ Non-Invasive Blood	■ Non-Invasive Blood
Pressure Sensor	Pressure Sensor
■ Grip Force Sensor,	■ Grip Force Sensor,
Muscle Twitch Sensor	Muscle Twitch Sensor
■ Single-axis	■ Single-axis
Goniometer, Patellar	Goniometer, Patellar
Reflex Hammer	Reflex Hammer
■ Pulse Oximeter,	■ Pulse Oximeter,
Respiration Monitor	Respiration Monitor
■ Event Marker, Force	■ Event Marker, Force
Transducer	Transducer
Dissolved Oxygen	Dissolved Oxygen
Sensor	Sensor
■ Nerve Bath Chamber,	■ Nerve Bath Chamber,
Needle Electrodes	Needle Electrodes
■ Bipolar Stimulating	■ Bipolar Stimulating
Electrode	Electrode
Headphones	■ Headphones
Human Physiology	Human Physiology
Measurements:	Measurements:
■ ECG, EMG, GSR	■ ECG, EMG, GSR
Hemispheric EEG	 Herispheric EEG
 Blood Pressure, Heart 	 Blood Pressure, Heart
Sounds	Sounds
Spirometry Deflay Testing	 Spirometry Deflex Testing
Reflex Testing,	■ Reflex Testing,
Reaction Times,	Reaction Times,
Polygraph	Polygraph
■ Facial EMG, Skin	■ Facial EMG, Skin
Temperature	Temperature
Stroop Test, Eriksen	■ Stroop Test, Eriksen
Flanker Test	Flanker Test
Animal Physiology	Animal Physiology
Measurements:	Measurements:
Muscle Contraction	 Muscle Contraction
■ Frog ECG	■ Frog ECG
■ Action Potentials	 Action Potentials
■ Cellular Metabolism	 Cellular Metabolism
■ Mechano-reflexes	Mechano-reflexes
Human Circulation:	Human Circulation:
■ Blood Pressure,	■ Blood Pressure,
Peripheral Circulation,	Peripheral Circulation,
and Body Position	and Body Position
■ Blood Pressure,	■ Blood Pressure,
Peripheral Circulation,	Peripheral Circulation,
and Imposed conditions	and Imposed conditions
Pulse Wave Velocity	■ Pulse Wave Velocity
Human Heart:	Human Heart:
The Electrocardiogram	■ The Electrocardiogram
<u> </u>	(ECG) and the Pulse
(ECG) and the Pulse	















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Heart Sounds and the	■ Heart Sounds and the
Electrocardiogram (ECG)	Electrocardiogram (ECG)
■ The Effects of Exercise	■ The Effects of Exercise
on the	on the
Electrocardiogram (ECG)	Electrocardiogram (ECG)
and the Pulse	and the Pulse
■ The Six-Lead	■ The Six-Lead
Electrocardiogram	Electrocardiogram
■ The Diving Reflex	■ The Diving Reflex
 Heart Rate Variability 	 Heart Rate Variability
(HRV)	(HRV)
Human Muscle:	Human Muscle:
Grip Strength and	■ Grip Strength and
Electromyogram (EMG)	Electromyogram (EMG)
Activity	Activity
■ Electromyogram	■ Electromyogram
Activity in Antagonistic	Activity in Antagonistic
Muscles	Muscles
■ EMG and Arm	■ EMG and Arm
Wrestling	Wrestling
Oculomotor Muscle	 Oculomotor Muscle
Activity	Activity
■ Response, Work,	■ Response, Work,
Summation and Tetanus	Summation and Tetanus
in Human Muscle	in Human Muscle
Kinesiology Targeted	 Kinesiology Targeted
Muscles	Muscles
Human Muscle Twitch	Human Muscle Twitch
Human Spirometry:	Human Spirometry:
Breathing Parameters at	Breathing Parameters at
Rest and after Exercise	Rest and after Exercise
Breathing and Gravity	Breathing and Gravity
■ Factors that Affect	■ Factors that Affect
Breathing Patterns	Breathing Patterns
■ Lung Volumes and	■ Lung Volumes and
Heart Rate	Heart Rate
Human Nerve:	Human Nerve:
Auditory and Visual	 Auditory and Visual
Reflexes	Reflexes
■ Stretch Receptors and	■ Stretch Receptors and
Reflexes with Reflex	Reflexes with Reflex
Hammer	Hammer
Stretch Receptors and	■ Stretch Receptors and
Reflexes with	Reflexes with
Plethysmograph	Plethysmograph
■ Human to Human	■ Human to Human
Interface	Interface
Animal:	Animal:
Skeletal Muscle -	Skeletal Muscle -
Work, Summation and	Work, Summation and
Tetanus	Tetanus
Smooth Muscle	Smooth Muscle
Contraction	Contraction
Byssal Retractor	Byssal Retractor
Muscle	Muscle
Frog Electrocardiogram	 Frog Electrocardiogram

















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			 Crayfish Heart Membrane Potentials Compound Action Potentials Cockroach Leg
			Mechanoreceptors Cockroach Cercal Sense Organs
			*With Trainings LOT 4 TOTAL ABC: Php11,394,800.00
		1	
5.0	1	L O T	CHEST DRAIN & NEEDLE DECOMPRESSION TRAINER
5.1	1	U	Chest Drain & Needle
		nit	Decompression Trainer This is a Simulator to deliver training in both
			surgical and guide-wire assisted thoracostomy and
			thoracentesis, chest drainage and needle decompression
			techniques. Chest tube insertion is for both types
			of pads, with the Advanced model's eco-
			lucent material allowing practice of Seldinger's ultrasound technique.
			Reservoirs in the rear of the model can be filled
			with fluid or mock blood to represent pleural
			effusion • Needle decompression air reservoirs provide
			realistic releases of air on insertion of needle
			• Anatomically accurate representation of an adult male torso with raised
			arms • Standard Pads have a
			Pleural Layer which has realistic give and "pop" when puncturing with
			forceps or finger • Combined use of the
			Advanced Pads and the chest reservoirs allows for















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	T		
the simulation of pleural		the simulation of pleural	
effusion		effusion	
VERSATILITY		VERSATILITY	
• Able to perform the		• Able to perform the	
Seldinger Technique		Seldinger Technique	
Trainer can be used in a		• Trainer can be used in a	
sitting or supine position		sitting or supine position	
CLEANING		CLEANING	
• Clean the product with a		• Clean the product with a	
damp soft cloth or		damp soft cloth or	
sponge, using warm water		sponge, using warm water	
with mild detergent		with mild detergent	
Always drain, clean and		Always drain, clean and	
dry after use to ensure		dry after use to ensure	
that the trainer remains in		that the trainer remains in	
		good condition	
good condition		good condition	
ANATOMY		ANATOMY	
• Adult male torso with		• Adult male torso with	
raised arms		raised arms	
• Internal landmarks: ribs,		• Internal landmarks: ribs,	
lung and diaphragm		lung and diaphragm	
8F8		8F8	
SKILLS GAINED		SKILLS GAINED	
Needle decompression/		• Needle decompression/	
needle thoracostomy of a		needle thoracostomy of a	
tension pneumothorax at		tension pneumothorax at	
both the 2nd and 5th		both the 2nd and 5th	
intercostal space		intercostal space	
_			
Ultrasound guided chest		• Ultrasound guided chest	
tube insertion, also known		tube insertion, also known	
as the Seldinger		as the Seldinger	
Technique, including		Technique, including	
insertion of the needle		insertion of the needle	
into the pleural space		into the pleural space	
under direct vision and		under direct vision and	
ultrasonic recognition of		ultrasonic recognition of	
chest structures		chest structures	
• Open or cut-down chest		• Open or cut-down chest	
-			
tube insertion, including		tube insertion, including	
recognition of correct		recognition of correct	
position, surgical incision,		position, surgical incision,	
blunt dissection through		blunt dissection through	
the chest wall, perforation		the chest wall, perforation	
of pleura and finger		of pleura and finger	
sweep		sweep	
		r	
• Suturing of the tube to		• Suturing of the tube to	
the chest wall		the chest wall	
the chest wall		the chest wall	
• Use of a chest drain,		• Use of a chest drain,	
including using with an		including using with an	
underwater seal		underwater seal	

















Office of the Bids and Awards Committee Telephone No.: (+63 32) 254 1452 local 141 or 125 Email: <u>cnubacsed@gmail.com</u> Website: <u>www.cnu.edu.ph</u>

*	With Trainings		*With Trainings	
	LOT 5 TOTAL ABC:		LOT 6 TOTAL ABC:	
	Php1,250,000.00		Php1,250,000.00	

Prepared By:

Noted By:

MS. MA. EVA L. OMPOC

Assistant Head, BAC Secretariat

DR. ALLAN ROY B. ELNAR BAC Chairperson







