

Republic of the Philippines OFFICE OF THE PRESIDENT COMMISSION ON HIGHER EDUCATION

CHED MEMORANDUM ORDER (CMO)

No.: <u>48</u> Series of 2007

SUBJECT:

REVISED MODEL EMBEDMENT OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) TRAINING REGULATIONS (TRs) IN THE BACHELOR OF AGRICULTURAL TECHNOLOGY (BAT)

PROGRAM

In accordance with the pertinent provisions of Republic Act (RA) No. 7722 otherwise known as the "Higher Education Act of 1994," and by virtue of Resolution No. 432-2007 of the Commission En Banc dated June 25, 2007, the revised model embedment of Technical and Vocational Education and Training (TVET) Training Regulations (TRs) in the Bachelor Of Agricultural Technology (BAT) program is hereby adopted and promulgated by the Commission.

ARTICLE 1 - AUTHORIZATION

The ladderized BAT program shall be operated only by institutions of higher learning with proper authority granted by the Commission on Higher Education (CHED) and by the respective Governing Boards in the case of chartered State Universities and Colleges (SUCs), Local Colleges and Universities (LCUs) and upon issuance of Certificate of Program Recognition (CoPR) by the Technical Education Skills Development Authority (TESDA). Said institutions shall submit application with full documentation in compliance with the requirements of this CMO and CMO No. 8 s. 2007, otherwise known as "Amendments to CMO No. 38 s. 2006 Entitled Procedures in the Processing of Applications for the Grant of Authority to operate Ladderized Programs as part of the Implementation of Executive Order No. 358"

ARTICLE II -- THE REVISED MODEL CURRICULUM

The revised model curriculum shall be adopted as the minimum requirement for the completion of the ladderized BAT program. TESDA Training Regulations embedded in this curriculum are as follows:

- 1. Agricultural Crops Production NC I
- 2. Horticulture NC II
- 3. Animal Production NC II
- 4. Slaughtering Operations NCII
- 5. Horticulture NC III
- 6. Agricultural Crops Production NC III

REVISED MODEL EMBEDMENT OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) TRAINING REGULATIONS (TRs) IN THE BACHELOR OF AGRICULTURAL TECHNOLOGY (BAT) PROGRAM

Title of Ladderized Program: Bachelor of Agricultural Technology (BAT) TVET qualifications covered by the Ladderized program:

- Agricultural Crops NC !
- Horticulture NC II
- Animal Production NC II Slaughtering Operations NCII
- Horticulture NC III
- Agricultural Crops Production NC III

First Year, 1st Semester

	Higher Education Subjects	ucation S	Subjects				I VE I Modules		
Description of Subjects	Lec	Lab	Units	Hrs. per semester	Prerequisites	Units of Competency	Module Title	Nominal Remarks Duration	Remarks
	(Hrs)	(Hrs)							
English 1	ω	0	ω	54		Receive and respond to workplace	 Receiving and responding to workplace 		
			! !			communication	communication		
Filipino 1	ω	0	ω	54					ļ
Mathematics for	ы	0	3	54		 Perform estimation and basic calculation 	 Performing estimation and basic calculation 		
Agriculture						 Use mathematical concepts and techniques 	 Using mathematical concepts and techniques 		
Agricultural Biology	2	ω	ω	90					
Field Crops and Cereal	2	ω	ယ	90		 Prepare land for agricultural crop production 	 Preparing land for agricultural crop production 		
Production						Implement plant nutrition programs	 Implementing plant nutrition programs 		
						 Prepare and apply chemicals 	 Preparing and apply chemicals 		
						Control weeds	Controlling weeds .		
; 1					,	 Establish agronomic crops 	 Establishing agronomic crops 		
						 Undertake agronomic maintenance activities 	 Undertaking agronomic maintenance activities 		
						Undertake agronomic crop harvesting	 Undertaking agronomic crop harvesting 		
Poultry Production	2	3	ω	90		Raise poultry	Raising poultry		
E.	2		(2)	36					
NSTP	3		(3)						
TOTAL			23	468					

First Year, 2nd Semester

	1	1					TVET Modules		
	Higher Education Subjects	ucation	Sipagne				I AE I MICONIES		
Description of Subjects	Lec	Lab	Units	Hrs. per	Prerequisites	Units of Competency	Module Title	Nominal Remarks	Remarks
				semester				Duration	
	(Hrs)	(Hrs)					to the same of the		
English II	3	0	ω	54		 Participate in workplace communication 	 Participating in workplace communication 		
						Lead workplace communication	 Leading workplace communication 		
Swine Production	2	ω	ω	90		Raise swine	Raising swine	•	
Management									
Farm Physics	2	ω	ω	90			A STATE OF THE STA		
Soil Management and	2	ω	ယ	90					
Conservation									
Agricultural Mechanics I	2	c	ر	a		Use farm tools and equipment	Osligiani tools and equipment		
Horticultural Crops	2	ယ	ယ	90		Conduct pre-horticultural farm operations	 Conducting pre-horticultural farm operations 		
Production Management	•					Produce vegetables	 Producing vegetables 		
						Produce fruit-bearing trees	 Producing fruit bearing trees 		
						 Prepare land for agricultural crop production 	 Preparing land for agricultural crop production 		
						 Implement plant nutrition programs 	 Implementing plant nutrition programs 		
						 Prepare and apply chemicals 	 Preparing and applying chemicals 		
						Control weeds	Controlling weeds		
						Establish horticultural crops	 Establishing horticultural crops 		
						 Coordinate horticultural maintenance program Coordinating horticultural crop harvesting 	 Coordinating horticultural crop harvesting 		
-						 Coordinate horticultural crop harvesting 			
PE	2		(2)	36			Lisayes,		
NSTP	3		(3)						
TOTAL			23	540					
	٠								

First Year, Summer

_	igher Ed	Higher Education Subjects	ects			TVET Modules		
Description of Subjects	Lec	Lab Uni	ts Hrs. per	Units Hrs per Prerequisites	Units of Competency	Module Title	Nominal Remarks	Remarks
-		<u></u> -	semester				Duration	
	(Hrs)	(Hrs)						
Social Science I	ယ	သ	54		Work with others	 Working with others 		
					 Demonstrate work values Work in a team environment 	Demonstrating work valuesWorking in a team environment		un en a m
					 Practice career professionalism Lead small teams 	 Practicing career professionalism Lead small teams 		
					Develop and practice negotiation skills Solve problems related to work activities	 Developing and practicing negotiation Solving problems related to work activities 		
Irrigation and Drainage	2	ω ω	90		Support irrigation work	 Support irrigation work 		
TOTAL		6	144					
Note: At this point, Agricu	ıltural Cr	ops Production	on National C	ertificate (NC) I	Note: At this point, Agricultural Crops Production National Certificate (NC) I will be issued by TESDA upon passing the certification process.	cation process.		

Second Year, 1st Semester

	Higher Education Subjects	ucation	Subjects			The state of the s	TVET Modules		
Description of Subjects	Гес	Lab	Units	Units No. of Hrs. Prerequisites per semester	^o rerequisites	Units of Competency	Module Title	Nominal Remarks Duration	Remarks
	(Hrs)	(Hrs)							
Postharvest Technology I	2	သ	ယ	90	-	 Perform post harvest operations of major tropical fruits 	 Performing post harvest operations of major tropical fruits 		
						 Perform post harvest operations of major lowland and semi-temperate vegetables 	 Performing post harvest operations of major lowland and semi-temperate vegetables 		
Runtinant Production Mgt.	2	ယ	ω	90		Raise small ruminants Raise large ruminants	 Raising small ruminants Raising large ruminants 		
Farm Business	2	ω	ω	90					
Most Toshaslasi	3	. 	J	20		CATTLE / OY / HOC / DIG / SWINE	CATTLE LOX / HOG / PIG / SWINE		
3		•		,		 Stun, shackle and lift animal 	 Stun, shackle and lift animal 		
						 Stick and bleed animal 	Stick and bleed animal		
Food processing of Animal	2	ယ	ယ	90		Perform cradle processes	Perform cradle processes		
and Sea Food Products	***************************************					 Flay cattle completely Eviscerate animal 	 Flay cattle completely Eviscerate animal 		
Food Processing and	2	ယ	ယ	90		 Split and quarter carcass 	 Split and quarter carcass 	•	
Agricultural products						Grade, label and stamp carcass	 Grade, label and stamp carcass 		
						Wash, trim and weigh carcass	Wash, trim and weigh carcass		
P.E.	2		(2)	36					
TOTAL			20	540					
Note: 1. Food process	sing of A	nimal an	ıd Sea F	ood Products	s should inclu	 Food processing of Animal and Sea Food Products should include slaughtering animal following Dhabiha Halal procedures 	procedures		

2. At this point, Horticulture NC II and Animal Production NC II will be issued by TESDA upon passing the certification process.

Second Year, 2nd Semester

1	Higher Education Subjects	ucation	Subjec	ts		TVET Modules		
Description of Subjects	Lec	Lab	Units	Lab Units No. of Hrs. Prerequisites per semester	Units of Competency	Module Title	Nominal Remarks Duration	Remarks
	(Hrs)	(Hrs)				the same of the sa		
Practicum in Agriculture			13	450				
Quality Evaluation and	2	ယ	دب	90				
im.	2		(2)	36		- The second sec		
TOTAL			18	576				
Note: At this point. Standblering Operations NCII will be issued by TESDA upon passing the certification process.	htoring) Postati	`^ \ <u>\</u>		in the south of the second			

Third Year, 1st Semester

T	Higher Education Subjects	ucation	Subject	S			TVET Modules	:	
Description of Subjects	Lec	Lab	Units	Lab Units No. of Hrs. Prerequisites per semester	Prerequisites	Units of Competency	Module Title	Nominal Remarks Duration	?emarks
	Hrs)	(Hrs)							
Filipino II	3	0	ω	2					
Philippine and Asian	ω		ယ	54					
Agriculture									
Computer education	2	ယ	ယ	90		Use relevant technologies	 Using relevant technology 		
Agricultural Mechanics II	2	သ	3	98					
Postitarvest handling of	2	ω	ω	90		 Implement a post harvest program 	 Implementing a post harvest program 		
perishable crops									
Postharvest handling of	2	ω	ω	90		Implement a post-harvest program	 Implementing a post-harvest program 		
durable and plantation				.,,-		 Implement vertebrate pest control programs 	 Implementing vertebrate pest control 		
crops						 Save, prepare and store agricultural seeds. 	programs Saving preparing and storing agricultural		
							seeds.		
TOTAL			18	432					
Ninia Atthioppint Assign	7		26.	مم القيد الا كالم	inning by TO	At the least Comp Production NO III will be included by TECDA those precise the partification process			

Note: At this point, Agricultural Crops Production NC III will be issued by TESDA upon passing the certification process.

Third Year, 2nd Semester

	Higher Education Subjects	lucation	Subjec	र्रेड			TVET Modules		
Description of Subjects	Lec	Lab	Units	Units No. of Hrs. Prerequisites	rerequisites	Units of Competency	Modute Title	Nominal Remarks Duration	Remarks
	(Hrs)	(Hrs)							
English iV	သ	0	3	54					
Rizal and Philippine	3	0	ယ	54					
Development						The second secon			
Agricultural Marketing	2	ပ	ယ	90					
Social Science II	ω	0	w	54					
Plant propagation and	2	ω	ယ	90		 Undertake field budding and grafting 	 Undertaking field budding and grafting 		
nursery mgt.	•					Undertake propagation activities	 Undertaking propagation activities 		
Course option (1)	2	3	သ	90			aming of		
TOTAL			18	432					

Note: At this point, Horticulture NC III will be issued by TESDA upon passing the certification process.

Third Year, Summer

	Higher Education Subjects	ucation	Subjec	S			TVET Modules		
Description of Subjects	Lec	Lab	Units	No.of hrs. per semester	Lab Units No.of hrs. Prerequisites per semester	Units of Competency	Module Title	Nominal Remarks Duration	?emarks
			.;			r i			1
	(1113)	(1110)						 -	
Course concentration ontion (2)			6	180					
Summer									
TOTAL			6	180					

Fourth Year, 1st Semester

-	Higher Education Subjects	ucation	Subjec	र्ड			TVET Modules		
Description of Subjects	Lec	Lab	Units	Lab Units No. of Hrs. Prerequisites	rerequisites	Units of Competency	Module Title	Nominal Remarks	Remarks
-			-	per semester				Duration	
	(Hrs)	(Hrs)							
English III	ယ	0	3	54					
Practical Statistics	3	0	ယ	54					
Crop and Animal Improvement	2	ယ	ω	90					
Agricultural business finance	ယ	0	ω	54					
Course concentration option (5)			60	180					
TOTAL			18	504					

Fourth Year, 2nd Semester

	igher Ed	ucation	Higher Education Subjects		110000000000000000000000000000000000000	TVET Modules		
Description of Subjects Lec	Lec	Lab	Lab Units No. of Hrs. Prerequisites per semester	Prerequisites	Units of Competency	Module Title	Nominal Remarks Duration	Remarks
	(Hrs) (Hrs)	(Hrs)						
Occupational Internship			18					
TOTAL								

The lists of Identified TVET Qualifications in BAT program are as follows:

1. Agricultural Crops Production NC I

Year/Sem.	Subject	Unit of Competency	Module Title
1 st Yr. 1 st	English 1	Receive and respond to	Receiving and
Sem.		workplace communication	responding to
			workplace
			communication
1 st Yr. 1 st	Mathematics for	Perform estimation and	Performing estimation
Sem.	Agriculture	basic calculation	and basic calculation
		<u> </u>	
1 st Yr. 2 nd	Agricultural	Use farm tools and	Using farm tools and
Sem.	Mechanics 1	equipment	equipment
1 st Yr.	Social Science 1	Work with others	Working with others
summer		Demonstrate work values	Demonstrating work
			values
1 st Yr.	Irrigation and	Support irrigation work	Supporting irrigation
summer	drainage		work

2. Horticulture NC II

Z. Horticultul	e NC II		
Year/Sem.	Subject	Unit of Competency	Module Title
1 st Yr. 2 nd	English 2	Participate in workplace	Participating in
sem.		communication	workplace
			communication
1 st Yr. 1 st	Mathematics for	Perform estimation and	Performing estimation
Sem.	Agriculture	basic calculation	and basic calculation
	"		
1 st Yr. 2 nd	Horticultural crops	Conduct pre-horticultural	Conducting pre-
sem	production mgt.	farm operations	horticultural farm
		Produce vegetables	operations
		Produce fruit-bearing trees	Producing vegetables
	•		Producing fruit-bearing
			trees
1 st Yr. 2 nd	Agricultural	Use farm tools and	Using farm tools and
Sem.	Mechanics 1	equipment	equipment
1 st Yr.	Social Science 1	Work in a team	Working in a team
summer		environment	environment
		Practice career	Practicing career
		professionalism	professionalism
2 nd Yr. First	Postharvest	Perform post harvest	Performing post
sem.	technology I	operations of major tropical	harvest operations of
		fruits	major tropical fruits
		Perform post harvest	Performing post
		operations of major	harvest operations of
		lowland and semi-	major lowland and
		temperate vegetable crops	semi-temperate
			vegetable crops

3. Animal Production NC II

Year/Sem.	Subject	Unit of Competency	Module Title
1 st Yr. 2 nd sem.	English 2	Participate in workplace communication	Participating in workplace communication
1 st Yr. 1 st Sem.	Mathematics for Agriculture	Perform estimation and basic calculation	Performing estimation and basic calculation
1 st Yr. 1 st sem	Poultry Production and Management	Raise poultry	Raising poultry
1 st Yr. 2 nd sem.	Swine Production Mgt.	Raise swine	Raising swine
1 st Yr. 2 nd Sem.	Agricultural Mechanics 1	Use farm tools and equipment	Using farm tools and equipment
1 st Yr. summer	Social Science 1	Work in a team environment Practice career professionalism	Working in a team environment Practicing career professionalism
2 nd Yr. 1 st Sem.	Ruminant Production Mgt.	Raise small ruminants Raise large ruminants	Raising small ruminants Raising large ruminants

4. Slaughtering Operations NCII

Year/Sem.	Subject	Unit of Competency	Module Title
2 nd Yr. 1 st	Meat Technology	Cattle / Ox / Hog / Pig /	Cattle / Ox / Hog / Pig
Sem		Swine	/ Swine
		Stun, shackle and lift animal	Stun, shackle and lift
2 nd Yr. 1 st	Food processing of	Stick and bleed animal	animal
Sem	Animal and Sea	Perform cradle processes	Stick and bleed animal
	Food Products*	Flay cattle completely	Perform cradle
		Eviscerate animal	processes
2 nd Yr. 1 st	Food Processing	Split and quarter carcass	Flay cattle completely
Sem	and Agricultural	Grade, label and stamp	Eviscerate animal
	products	carcass	Split and quarter
2 nd Yr, 2 nd	Quality Evaluation	Wash, trim and weigh	carcass
sem	and	carcass	Grade, label and stamp
	Standardization		carcass
			Wash, trim and weigh
			carcass

^{*}Should include slaughtering animal following Dhabiha Halal procedures

5. Horticulture NC III

Year/Sem.	Subject	Unit of Competency	Module Title
Year/Sem. 1 st Yr. 2nd sem		Unit of Competency Prepare land for agricultural crop production Implement plant nutrition programs Prepare and apply chemicals Control weeds Establish horticultural crops Coordinate horticultural maintenance program Coordinate horticultural crop harvesting	Preparing land for agricultural crop production Implementing plant nutrition programs Preparing and apply chemicals Controlling weeds Establishing horticultural crops Coordinating horticultural maintenance program Coordinating
1 st Yr. 2 nd	English 2	Lead workplace	horticultural crop harvesting Leading workplace
sem.		communication	communication
1 st Yr. 1 st Sem.	Mathematics for Agriculture	Use mathematical concepts and techniques Perform estimation and calculations	Using mathematical concepts and techniques Performing estimation and calculations
1 st Yr. Summer	Soc Science 1	Leads small teams Develop and practice negotiation skills Solve problems to related to work activities	Leading small teams Developing and practice negotiation skills Solving problems to related to work activities
3rd Yr. summer	Computer education	Use relevant technologies	Using relevant technologies
3 rd Yr. 1 st sem.	Post Harvest handling of perishables	Implement a post-harvest program	Implementing a post- harvest program
3 rd Yr. 2 nd sem.	Plant propagation and nursery mgt.	Undertake field budding and grafting Undertake propagation activities	Undertaking field budding and grafting Undertaking propagation activities

6. Agricultural Crops Production NC III

Year/Sem.	Subject	Unit of Competency	Module Title
1 st Yr. First	Field Crops and	Prepare land for	Preparing land for
sem	Cereal production	agricultural crop production Implement plant nutrition programs Prepare and apply	agricultural crop production Implementing plant nutrition programs
		chemicals Control weeds Establish agronomic crops	Preparing and apply chemicals Controlling weeds
		Undertake agronomic maintenance activities Undertake agronomic crop	Establishing agronomic crops Undertaking

		harvesting activities	agronomic maintenance activities Undertaking agronomic crop harvesting activities
1 st Yr. 2 nd sem.	English 2	Lead workplace communication	Leading workplace communication
1 st Yr. 1 st Sem.	Mathematics for Agriculture	Use mathematical concepts and techniques Perform estimation and calculations	Using mathematical concepts and techniques Performing estimation and calculations
1 st Yr. Summer	Soc Science 1	Leads small teams Develop and practice negotiation skills Solve problems to related to work activities	Leading small teams Developing and practice negotiation skills Solving problems to related to work activities
3rd Yr. summer	Computer education	Use relevant technologies	Using relevant technologies
3 rd Yr. 1 st sem.	Post Harvest handling of durable and plantation crops	Implement a post-harvest program Implement vertebrate pest control programs Save, prepare and store agricultural seed	Implementing a post- harvest program Implementing vertebrate pest control programs Saving, preparing and storing agricultural seed

ARTICLE III - SEPARABILITY AND REPEALING CLAUSES

Any provision of this Order, which may thereafter be held invalid, shall not affect the remaining provisions.

All CHED issuances or part thereof inconsistent with the provision in this CMO shall be deemed modified or repealed.

IV. EFFECTIVITY

This order shall take effect after its publication in the official Gazette or Newspaper of General Circulation.

Pasig City, Philippines. August 15, 2007

FOR THE COMMISSION:

CARLITO S. PUNO, DPA

Chairman (