## ENGSCI9510 Project Management Assignment 1 – Xinyu Yun

## Q1.

Firstly, in this evaluation, the 'Must Objectives' will be considered based on the University's vision and missions, some of the projects may be not related to the departments in planned missions, but they will not cause adverse effect. Secondly, the 'Top 10 MacLeans poll' objective will be estimated by the 2015 raking methodology published from MacLean on the aspects of students and class, faculty, resources, student support, library, reputation etc. (http://www.macleans.ca/education/unirankings/university-rankings-2015-me

(http://www.macleans.ca/education/unirankings/university-rankings-2015-methodology/).

Finally referring to the expenditure and ROI, the NRC funds will not be excluded in the calculation of expenditure if the project has any because NRC funds is also one of the weighted elements, meanwhile the ROI will partially based on the result of weighted average.

Here is my evaluation for following 7 projects:

Must Objectives	'	Must Meet if impa	acts	1	2	3	4	5	6	7
All projects must meet current legal, safety, a	nd									
environmental standards		y=yes, n=no, N/A		у	у	у	N/A	y	y	y
All projects must be consistent with in some way adding to		N/A		ĺ	ľ			ľ	ĺ	
the body of knowledge at UWO.		y=yes, n=no, N/A		v	v	v	l <sub>n</sub>	v	l <sub>v</sub>	v
All projects must not have an adverse effect on current or				,	ľ	ľ		ľ	,	,
planned operations within UWO.		y=yes, n=no, N/A		l.,	l.,	l.,	l.,	l.,	l.,	.,
primited operations training to the	Relative			y	У	У	y	y	y	У
Want Objectives	Importance 1-	Single Project Definition		Weighted Score						
		0 = no potential	1 =							
Top 10 MacLeans poll	80	Low Potential	2 =			١ .	١.	_		
		High Potential 0 = no potential	1 =	possible	possible	2	1	2	1	2
NRC Matching funds	75	Low Potential	2=							
		High Potential	_	2	l 0	ه ا	2	2	0	0
		0 = no potential	1 =	_	_		_	_		
Commercial activity at Stiller Center	40	Low Potential	2 =							
		High Potential		0	0	possible	possible	2	0	0
		0 = no potential	1=							
Raises Environmental consciousness	50	Low Potential High Potential	2 =	۱ .	0	٥ ا	2	4	0	,
		0 = no potential	1 =	<del>  '</del>	- ·	1 0		· '	, ·	
Does not apply pressure to increase tuition	60	Low Potential	2 =							
		High Potential	_	2	2	. 0	1	2	2	0
		0 = no potential	1 =							
Enhances UWO reputation for innovation	55	Low Potential	2 =	_			_			
		High Potential		0	possible	2	2	2	1	1
Provides basis for new faculty at UWO	15	0 = no potential Low Potential	1 = 2 =							
		High Potential	2 -	0	1 1	possible	possible	2	possible	2
		0 = no potential	1 =			POCOIDIO	poddibio		poddibio	_
Generates 14% ROI	70	Low Potential	2 =							
		High Potential		2	1	1	0	2	2	1
Is mission critical or less than \$1million capital		0 = no potential	1=							
expenditure	80	Low Potential High Potential	2 =	2	2	۱ ،	ا ا	2	2	
•			0	_				_		
	10	otal Weighted			365	340	500	1000	555	575
		F	riority			Lowest		Highest		

## Q2.

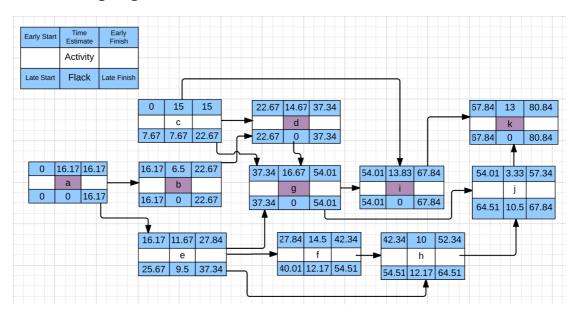
The Time Estimate calculation will be based on the 3-points estimation which applies the Beta Distribution: tE = (tO + 4tM + tP) / 6

Aativity	Preceding	Doot	Lilealea	<b>TA7</b>	Time est.
Activity	activity	Best	Likely	Worst	(TE)
а	-	12	15	25	16.17
b	a	4	6	11	6.50
С	-	12	12	30	15.00
d	b,c	8	15	20	14.67
е	a	7	12	15	11.67
f	e	9	9	42	14.50
g	c,d,e	13	17	19	16.67
h	e,f	5	10	15	10.00
i	c,g	11	13	20	13.83
j	g,h	2	3	6	3.33
k	j,i	8	12	22	13.00

The critical path is the sequence of activities that represents the longest path through a project, which determines the shortest possible project duration.

The longest path is a-b-d-g-i-k.

The following diagram shows the full AON details:

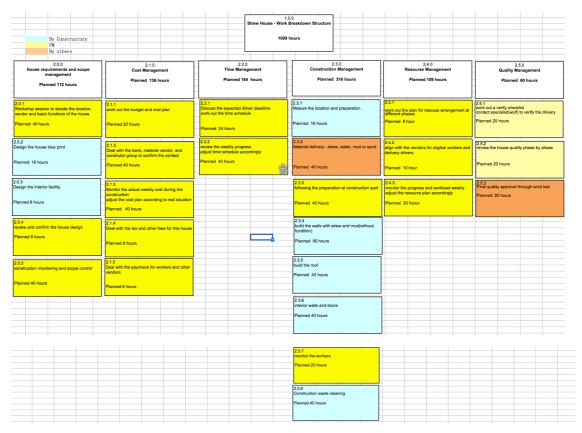


Q3.

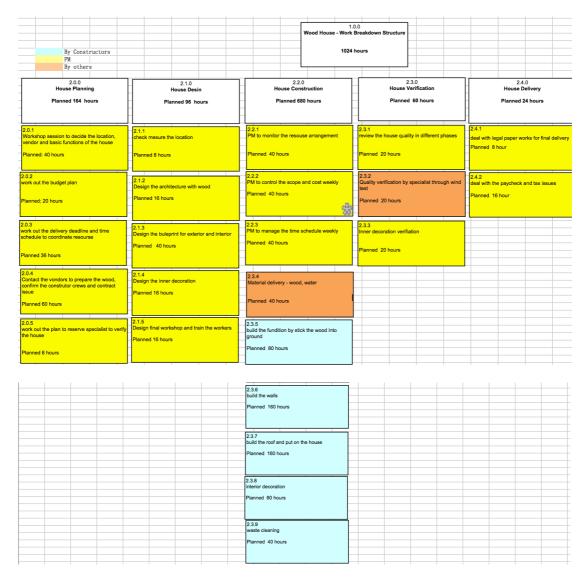
The WBS is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables.

The WBS organizes and defines the total scope of the project, and represents the work specified in the current approved project scope statement.

The first pig's stew house, I would like to decompose the project by work packages: requirement & scope management, cost management, time management, resource management, and quality management etc.



Secondly for the wood house, I would like to breakdown the work phase by phase including the planning, design, implementation, verification, and delivery.



Finally the brick house will use the WBS by deliveries: Land, Materials, House architecture, decoration and interior facility.

By Constructors		1.0.0 rk Breakdown Structure			
PM By others					
2.0.0	1	2.2.0	2.3.0		
Land	2.1.0 House Material	House Architecture	House Interior Decoration and facility		
Planned 80 hours	Planned 112 hours	Planned 480 hours	Planned 360 hours		
.0.1	2.1.1	2.2.1	2.3.1		
hoose and compare the location(better far way from the wolf)	contact vendor to plan the material purhase and delivery	Design the buleprint and structure	Design the decoration		
lanned: 20hours	Planned 8 hours	Planned 40 hours	Planned 20 hours		
2.0.2		2.2.2 Manage the cost and resource	2.3.2		
et the legal approval for building a house	manage the time schedule for material deliver	Planned 40 hours	Manage the decoration resource and cost		
ialilieu. 20 flouis	Planned 8 hours	袋	Planned 40 hours		
.0.3	2.1.3	2.2.3	2.3.3		
neasure the land and prepare the design delivery and pile up the bricks and oth decoration material		Moniter the workload and time schedule Planned 40 hours	Moniter the workload and time schedule		
lanned 20 hours	Planned 40 hours	Planned 40 nours	Planned 40 hours		
.0.4	2.1.4	2.3.4	2.3.4		
leal with the tax	manage the cost of material and facility	dig the fundation	Manage the decoration resource and cost		
Planned 20 hours	Planned 16 hours	Planned 80 hours	Planned 40 hours		
	2.1.5	2.3.5	2.3.5 paint the brick walls and inner decoration		
	prepare the cement for building brick house	build the brick walls and roof			
	Planned 40 hours	Planned 160 hours	Planned 160 hours		
		2.3.6 build the brick inner structure like fireplace	2.3.6 Waste cleaning		
		Planned 80 hours	Planned 20 hours		
			I		
		2.3.7			
		monitor the quality	2.3.7  Quality verification by specialist on environmental standard and safety		
		Planned 20 hours	environmental standard and safety  Planned 20 hours		
			r latilieu 20 Hours		
			•		
		2.3.8	2.3.7		
		Architecture verification by specilist			
			Manage the paycheck of vendors and worker		