

**CEV492E GRADUATION DESIGN PROJECT (.....-..... FALL/SPRING SEMESTER)
RUBRIC FOR GRADUATION DESIGN PROJECT FOR INTEGRATED SOLID WASTE MANAGEMENT**

TEAM NO/NAME : TEAM MEMBERS :	EVALUATER(S): TOTAL GRADE:
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Description	Comments	Grade
REPORT/PROJECT (15 Points)		
Grammar / Technical Writing Skills (2 Points)	Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/> Comments(s):	
Statement of Purpose (1 Point x 2 = 2 Points)	Purpose(s) are presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	Project is clearly defined: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
General Project Format (1 Point x 5 = 5 Points)	Contents: Available <input type="checkbox"/> Not Available <input type="checkbox"/>	
	List of Tables: Available <input type="checkbox"/> Not Available <input type="checkbox"/>	
	List of Figures: Available <input type="checkbox"/> Not Available <input type="checkbox"/>	
	Format of Tables and Figures: Suitable <input type="checkbox"/> Not Suitable <input type="checkbox"/>	
	List of Appendix: Available <input type="checkbox"/> Not Available <input type="checkbox"/>	
Literature Review (2 Points)	Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/>	
Conclusion and Discussion (2 Points)	'Conclusion' part is included and the results are discussed: Yes <input type="checkbox"/> No <input type="checkbox"/>	
References (1 Point x 2 = 2 Points)	References are properly cited in the body: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	References are presented completely and in proper format in 'References' part: Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Comments(s):	
SUB-TOTAL (REPORT/PROJECT)		

DESIGN (50 Points)		
Legal Issues (3 Points)	Related legislation is investigated and evaluated: Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/> Comments(s):	
Project Area (3 Points)	Characteristics (geographical, meteorological, geological, etc.) of the investigated project area are investigated in detailed: Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/> Comments(s):	
Integrated Solid Waste Management Plant (2 Points x 3 = 6 Points)	Alternatives (min 2 sites) for the integrated solid waste management plant are presented and selection reasons are explained: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	The proposed alternatives are compared and presented in a table: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	Topographical map (existing situation) of the most appropriate alternative and approximate general layout of the plant are presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
Conceptual Design (Preliminary-Investigation) (2 Points)	Conceptual (preliminary) design report is presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
Feasibility Report / Draft Project (6 Points x 6 = 36 Points)	Excavation and filling plans of the plant are presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	Leachate calculations are done and drainage (collection) plan is presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	Gas amount is calculated and locations of the gas wells at the plant are shown in the drawings : Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	Management plan for the biodegradable waste management is given and design of minimization/recovery plant is done: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	Management plan for packaging waste is given and MRF capacity is determined: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
	“Application of advanced principles and practice”: Novelty, and if applicable innovativeness, is realized in at least one of the following aspects: Disposal method / technology / design / project management, etc. Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):	
SUB-TOTAL (DESIGN)		

ENVIRONMENTAL MANAGEMENT ISSUES (15 Points)		
Risk Assessment (3 Points)	Risk factors are identified, impacts of risk factors are predicted, and a risk plan is developed: Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/>	
Uncertainty (3 Points)	Uncertainties for system design are specified: Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/>	
Sustainability (3 Points)	Sustainability with respect to economic, social, and environmental aspects is considered: Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/>	
Life-Cycle Assessment (3 Points)	Life-cycle assessment steps for the plant are considered and relevant necessary evaluation is carried out: Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/>	
Environmental Impacts (3 Points)	Environmental benefits / hazards to the project area and the local community are forecasted: Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/>	
SUB-TOTAL (ENVIRONMENTAL MANAGEMENT ISSUES)		
PROJECT SCHEDULE (GANTT CHART) and COST ANALYSIS (20 Points)		
Work–Duty Schedule (1 Point x 2 = 2 Points)	Gantt chart for the required assignments is presented: Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Duty of each team member is defined: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Cost Analysis (3 Points x 6 = 18 Points)	Necessary cost calculations are done including bill of quantity, price bill of quantity and tender: Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Initial investment costs (construction/equipment/fittings/control/automation, etc.): Available <input type="checkbox"/> Not Available <input type="checkbox"/>	
	Operation costs (energy, chemicals, staff, maintenance and repairing, etc.): Available <input type="checkbox"/> Not Available <input type="checkbox"/>	
	Total investment cost calculations are presented: Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Unit cost (TL/ton waste; TL/capita) calculations are presented: Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Waste management tariff proposal is prepared: Yes <input type="checkbox"/> No <input type="checkbox"/>	
SUB-TOTAL (PROJECT SCHEDULE and COST ANALYSIS)		
TOTAL		