

**CEV492E GRADUATION DESIGN PROJECT (.....-..... FALL/SPRING SEMESTER)
RUBRIC FOR FINAL DESIGN PROJECT**

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):	
	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):	
	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 (geographic, meteorological, geologic, etc.) of the investigated project area are investigated in detailed: Competent <input type="checkbox"/> Moderate <input type="checkbox"/> Incompetent <input type="checkbox"/> Comments(s):
Wastewater Treatment Plant (WWTP) Process (2 Points x 3 = 6 Points)	WWTP process alternatives (minimum 3) are defined and their flow schemes are presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):
	Basic process calculations of the proposed alternatives are done, compared and presented in a table: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):
	Approximate general layout of the most appropriate alternative is 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)	Final general layout and the piping plan of the WWTP are presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):
	Appropriate equipment are selected for the WWTP: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):
	Architectural drawings of each WWTP unit are presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):
	Final hydraulic profile of the WWTP is presented: Yes <input type="checkbox"/> No <input type="checkbox"/> Comments(s):
	Piping and Instrumentation Diagram (P&ID) of the WWTP is presented: 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: Treatment process / 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 WWTP 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/equipments/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/m ³ ; TL/capita) calculations are presented: Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Wastewater tariff proposal is prepared: Yes <input type="checkbox"/> No <input type="checkbox"/>	
SUB-TOTAL (PROJECT SCHEDULE and COST ANALYSIS)		
TOTAL		