Docente: **Bruce D. Marron**
Ciclo: **25-2**
Materia: **Terminología Especializada en Documentos de Tecnología e Ingeniería**
Curso: **IT0627**
Licenciatura: **Interpretación y Traducción**
Horario: **Jueves 16:00 – 19:00**
Grupo: **6A**

HW_02.2 Engineers/Scientist Problem Solving Rubric (convert to 10 point scale)

Criteria	5 Points (Excellent)	4 Points (Very Good)	3 Points (Satisfactory)	2 Points (Needs Improvement)	1 Point (Unsatisfactory)
Conceptual Understanding	Demonstrates profound insight into engineering/scientific problem-solving methodology with comprehensive and nuanced analysis	Shows strong understanding with clear and detailed explanation of problem-solving approach	Provides basic understanding of problem-solving process with moderate depth	Limited understanding with superficial explanation	Minimal or incorrect understanding of problem-solving methodology
Question Responses (First Step, Worldview, Assumptions, Models)	Exceptionally detailed explanation of i) initial problem-solving steps; ii) foundational principles; iii) explicit and implicit assumptions; and iv) model utility with with critical analysis and theoretical justification	Clear and well-supported description of i) initial problem-solving steps; ii) foundational principles; iii) explicit and implicit assumptions; and iv) model utility	Basic description of i) initial problem-solving steps; ii) foundational principles; iii) explicit and implicit assumptions; and iv) model utility	Vague or incomplete description of i) initial problem-solving steps; ii) foundational principles; iii) explicit and implicit assumptions; and iv) model utility	No coherent explanation of i) initial problem-solving steps; ii) foundational principles; iii) explicit and implicit assumptions; and iv) model utility
Writing Quality and Organization	Exceptional clarity, coherence, and academic writing style with perfect grammar and structure	Very clear, well-organized writing with minimal errors	Acceptable academic writing with some structural issues	Unclear writing with multiple grammatical errors	Poorly written, incoherent text

Criteria	5 Points (Excellent)	4 Points (Very Good)	3 Points (Satisfactory)	2 Points (Needs Improvement)	1 Point (Unsatisfactory)
Translation Quality	Flawless, nuanced translation maintaining original meaning and academic tone	Accurate translation with minor linguistic refinements needed	Comprehensible translation with some linguistic inconsistencies	Partial or awkward translation	Incorrect or incomprehensible translation
Reference Quality	Exceptional use of high-quality, current scholarly sources with sophisticated integration	Strong reference usage with appropriate citations	Adequate reference inclusion with basic citation	Limited or inappropriate reference usage	No credible sources used

Assignment

Investigate the mental process that engineers and scientists use to solve a problem. More specifically,

i) Given a design or conceptual problem, what is a first step that engineers and scientists are likely to take? Why?

ii) What are the accepted foundations for conceptualizing a problem? That is, what is the worldview or the overarching mental model that lies at the very foundation of science and engineering? What are the components of this worldview?

iii) What ASSUMPTIONS are made, consciously or not, when engineers and scientists begin modeling a problem?

iv) When are models useful for reaching a solution to a problem? If no solution presents itself what can the engineer or scientist do?

The results of your investigations will be delivered in a one-page+ paper. The original paper is to be written in English and you must provide a Spanish translation. Standard format applies and references must be included.