STARK STATE COLLEGE

GENERAL SYLLABUS

Course Information

Course Name: Ariel Technical Documentation
Course Number: ARL240

Required Materials

Textbook(s): Ariel Technical Documentation Handbook Ariel Corp.
Required Readings: None
Additional Materials: Scientific Calculator, Laptops, Note Pads, Writing Utensils, Web Links, Handouts and related items as provided in class.

Course Outline/Calendar

The date of coverage and order of coverage may be modified based on the faculty member and events beyond the control of faculty members that interfere with class times and teaching.

Week	Chapter/Topic/Lab
1: Introduction to Ariel and Technical Communication	○ Topic: Ariel Corporation's history, products, and core business functions. ○ Focus: Core principles of technical communication and the role of documentation in the product lifecycle. ○ Assignment: Write an introductory memo summarizing Ariel's history and mission.
2: Understanding the Ariel Product Line	○ Topic: An overview of Ariel's reciprocating compressors, including the JG/JGA, KB, and JGM series. ○ Focus: Compressor components (crankshafts, cylinders, valves) and their functions. ○ Assignment: Create a technical description of a specific Ariel compressor component.
3: Audience Analysis and Gathering Information	○ Topic: Identifying user personas (e.g., mechanics, packagers, end-users) and their information needs. ○ Focus: Interviewing Subject Matter Experts (SMEs) and accessing Ariel's internal technical resources and software. ○ Assignment: Conduct a mock interview with an SME to gather information for a document.
4: Ariel Documentation Standard and Tools	○ Topic: In-depth review of Ariel's quality assurance, packager, and industry specification standards (e.g., API 618). ○ Focus: Familiarization with Ariel's documentation tools and content management systems. ○ Assignment: A quiz on Ariel's documentation standards.
5: Writing Step-By-Step Instructions and Work Instructions	○ Topic: Best practices for writing clear, concise, and accurate procedures. ○ Focus: Using the Ariel Application Manual and Maintenance Manuals as models. ○ Assignment: Write a set of work instructions for a simple maintenance task, like checking bearing clearances.

Week	Chapter/Topic/Lab
6: Developing Operation and Maintenance Manuals	○ Topic: Structuring and writing comprehensive user manuals for complex machinery. ○ Focus: Reviewing and updating existing Ariel manuals based on product updates. ○ Assignment: Create a draft of a section for a maintenance manual, such as a lubrication system procedure.
7: Integrating Visuals and Multimedia	○ Topic: Principles of visual design for technical documents and the use of visuals and videos. ○ Focus: Creating and editing diagrams, flowcharts, and 3D animations relevant to Ariel's products. ○ Assignment: Design a visual diagram illustrating a complex compressor system.
8: Designing Digit-First Documentation	○ Topic: Principles of designing for online delivery, mobile access, and searchability. ○ Focus: Exploring interactive features like hyperlinks and navigation within digital manuals. ○ Assignment: Develop an outline for a new digital documentation module.
9: Working With The Ariel Performance Program	○ Topic: Hands-on training using the Ariel Performance Program to size and optimize compressors. ○ Focus: Documenting performance data and running calculations. ○ Assignment: Use the software to generate performance data and write a corresponding technical data sheet.
10: Writing For Compliance and Safety	○ Topic: Documenting compliance with industry standards and safety regulations. ○ Focus: Incorporating warnings, cautions, and safety procedures into manuals. ○ Assignment: Edit an existing manual section to improve its clarity regarding safety.
11: Documenting the Ariel Smart Compressor (ASC)	○ Topic: Focusing on documentation for Ariel's advanced monitoring and diagnostic system. ○ Focus: Explaining complex concepts like digital twins and remote monitoring for end-users. ○ Assignment: Create a troubleshooting guide for a feature of the ASC system.
12: Documentation For A Global Audience	○ Topic: Principles of writing for translation and localization. ○ Focus: Using simple language and avoiding cultural idioms to ensure global accessibility. ○ Assignment: Rewrite a section of a manual for a non-native English speaker.
13: Capstone Project Planning and Research	○ Topic: Students begin a final project, such as creating a new assembly manual or revising a major product manual. ○ Focus: Defining project scope, audience, and gathering all necessary information. ○ Assignment: Submit a project proposal and research plan.
14: Capstone Project Drafting	○ Topic: Drafting and content creation for the capstone project. ○ Focus: Applying all course learnings to create a complete and accurate document. ○ Assignment: Submit a substantial draft of the capstone project.
15: Capstone Project Review and Usability Testing	○ Topic: Peer reviews and usability testing to improve clarity and effectiveness. ○ Focus: Working in teams to provide constructive feedback on project drafts. ○ Assignment: Conduct and report on a usability test of a peer's project.
16: Final Project Presentation and Course Review	○ Topic: Students present their completed capstone projects. ○ Final Exam: