Advanced Technical Reading and Writing 2
Course Syllabus

Course Description

In this course, students will develop the scientific and technical reading and writing skills they need to understand and construct research articles in their specialist field. The course will be divided into three parts. In the first part of the course, students will review what was taught in Advanced Technical Reading and Writing 1. In particular, they will study about the characteristic features of quality research studies, and how science and engineering research articles are constructed in terms of intended audience, purpose, organization, flow, style, and presentation.. Using text analysis tools, students will also learn to identify the unique features of technical texts in their particular field. In the second part of the course, students will find a suitable "Call for Papers" from a journal in their field, and then, following the journal's "Instructions for Authors," write a research paper. At each stage in the writing process, students will learn about important aspects of writing, such as how to paraphrase, cite, and reference previous work, how to explain figures and tables, and how to summarize the research in the form of an abstract.

Course Goals

- understand the importance of English in the fields of science and engineering
- understand common problems associated with using technical vocabulary in specialist fields
- use effective strategies to learn technical vocabulary in specialists fields
- use text analysis tools to identify differences in the audience, purpose, structure, style, and presentation of technical texts in different fields
- identify the structure of technical research papers in specialist fields
- understand research journal "call for papers" and "instructions for authors" sections
- write the title, abstract, introduction, methods, results, discussion/conclusion sections of a research paper in a specialist field
- write simple and extended definitions.
- explain methods and processes
- explain information in figures and tables
- know how to strengthen or weaken the interpretation of research finding through hedging
- understand the importance of references, citations and avoidance of plagiarism
- follow common conventions for citing and referencing information in a research article

Textbook and Materials

Course materials will be announced in the first lesson.

Grading

Student evaluations will be based on a series of written reports, class participation, and an end of term report.

Course Schedule

Week 1	Introduction to Technical Writing
	Review of Advanced Technical Reading and Writing 1:
	What is research? How do you structure a research paper.
Week 2	Basic Principles in Technical Writing:
	Audience, Purpose, Organization, Flow, Style, Presentation
Week 3	Introduction to text analysis tools (1):
	analyzing biographies 1
Week 4	Introduction to text analysis tools (2):
	analyzing biographies 2
Week 5	First steps in text analysis (1):
	Building a corpus of research papers
Week 6	First steps in text analysis (2):
	Creating vocabulary lists, searching for words, phrases, and grammar patterns
Week 7	Writing a research paper proposal:
	choosing a topic, deciding a methodology
Week 8	Preparing to write a research paper:
	understanding the "Instructions for Authors" guide in a research journal, understanding the importance of citation and references
Week 9	Writing a research paper title:
	keywords, noun phrases, and prepositions
Week 10	Writing a research paper introduction:
	writing definitions, understanding tense usage
Week 11	Writing a research paper methods section:
	explaining methods and processes
Week 12	Writing a research paper results section:
	explaining figures and tables, adjusting the strength of interpretations using hedging
Week 13	Writing a research paper discussion/conclusion section:
	summarizing results, adjusting the strength of interpretations using hedging
Week 14	Writing a research paper reference section:
	citation and reference formatting in specialists fields
Week 15	Wrap-up:
	Summary of course
	Final report submission details

Other

① Students are expected to attend each class, and actively participate in group and class discussions. Students will also be required to complete all homework exercises, and submit an extended report at the end of the semester.

② Bringing an advanced English/Japanese dictionary to class is recommended.

End-of-Term Paper Grading Rubric

Grade	Details

A+	Overall> Shows fluency in both language use and ideas.
	• Mechanics
	  ➢ Follows the journal template (headings/presentation/layout)
	  ➢ Spell and grammar checked
	• Citation/References
	  ➢ Cites all sources and references these correctly
	  ➢ Uses all appropriate and high level sources (at least one journal article)
	• Paragraphs
	  ➢ Writes in paragraphs of over 3 sentences
	  ➢ Paragraphs include topic sentences
	  ➢ Paragraphs are linked with logical connectors
	• Style
	  ➢ Shows good understanding of formal academic writing style (correct verb usage, no run on expressions, no slang, preciseness, no contractions, limited use of "I" "You", no direct questions)
	• Grammar
	  ➢ Shows good understanding of tense/voice usage in different sections of a paper
	  ➢ Complex sentence structure is used
	  ➢ Discussions are hedged
	  ➢ Shows good understanding of article usage
	• Organization
	  ➢ Titles: detailed and structured correctly
	  ➢ Introduction: discusses background/past research and the problems (with citations)
	  ➢ Methods: written in correct tense/voice; procedure is clear, search engines and sources or materials and procedures described
	  ➢ Results: describes main points in figures/tables
	  ➢ Discussion: discusses results with correct hedging

A	Overall> Very well written paper with clear ideas and clear language but with minor errors.
	• Mechanics
	  ➢ Follows the journal template with only minor errors
	  ➢ Spell and grammar checked but there may be minor mistakes
	• Citation/References
	  ➢ Sources are cited and referenced correctly
	• Paragraphs
	  ➢ Writes in paragraphs of over three sentences
	  ➢ Paragraphs include topic sentences
	  ➢ Sentences are usually connected but there may be minor errors in logical connectors
	• Style
	  ➢ Shows an understanding of formal academic writing style but there are minor mistakes
	• Grammar
	  ➢ Shows understanding of tense/voice usage
	  ➢ Correct sentence structure is used; little or no awkward phrasing is seen
	  ➢ Hedging is used
	  ➢ Shows an understanding of article usage but minor mistakes exist
	• Organization
	  ➢ Titles: detailed and structured correctly; some minor mistakes may exist
	  ➢ Introduction: discusses background/past research and the problems (with citations); some minor mistakes may exist
	  ➢ Methods: written in correct tense/voice; some minor mistakes may exist; procedure is clear, search engines and sources or materials and procedure described
	  ➢ Results: describes main points in figures/tables; some minor mistakes may exist
	  ➢ Discussion: discusses results with correct hedging; some minor mistakes may exist

B	Overall> Macro issues (purpose, organization, paragraph structure) are all strong but micro issues (grammar, sentence structure) may be problematic.
	• Mechanics
	  ➢ Follows the journal template with some errors
	  ➢ Various spelling and grammar mistakes are noticeable but overall meaning is clear
	• Citation/References
	  ➢ Most sources are correctly cited and referenced but may show problematic formatting
	• Paragraphs
	  ➢ Most paragraphs are at least three sentences long
	  ➢ Most paragraphs have good topic sentences
	  ➢ Many sentences are disjointed or use a very limited number of logical connectors

	• Style ➢ Attempts to write in formal academic writing style but problems remain (logical connectors, no contractions, no run-on expressions, limited use of "I" "You", no direct questions) • Grammar ➢ Tense/voice problems are evident but sentence meaning is clear ➢ Basic sentence structure is good but there is some awkward phrasing ➢ Hedging is weak ➢ Various article mistakes are noticed • Organization ➢ Titles: some structure links and/or content are not appropriate ➢ Introduction: limited discussion of background/past research with little citation making the section unconvincing ➢ Methods: mistakes in tense/voice and several steps are not clear; procedure is mostly clear, search engines and sources are basically described ➢ Results: limited use of figures/tables with only brief explanation ➢ Discussion: discusses results in simple fashion with little hedging
C	Overall> Problems exist with macro issues and poor sentence construction make meaning difficult to follow; however, the paper shows evidence of understanding of the material presented in class • Mechanics ➢ The template is largely ignored ➢ Various spelling and grammar mistakes are noticeable and overall meaning is not always clear • Citation/References ➢ Citation and/or referencing are very limited or problematic. • Paragraphs ➢ Paragraphs are less than three sentences long. ➢ Topic sentences are often missing ➢ Few or no logical connectors are used • Style ➢ Little attempt to write in a formal academic writing style (logical connectors, no contractions, no run-on expressions, limited use of "I" "You", no direct questions) • Grammar ➢ Tense problems are clear ➢ Hedging is very weak or non-existent ➢ Many article mistakes are apparent • Organization ➢ Titles: overly simple and some structure links and/or content are not appropriate ➢ Introduction: limited discussion of background/past research with little citation making the section unconvincing ➢ Methods: mistakes in tense/voice and several steps are not clear ➢ Results: limited use of figures/tables with only brief explanation ➢ Discussion: discusses results in simple fashion with no hedging
F	Overall> Paper does not demonstrate an understanding of macro issues, and significant micro errors make understanding difficult. • The final report is not submitted or outline was not approved • The final report shows evidence of plagiarism (more than 20% with no evidence of an attempt to paraphrase and cite when using original or translated sentences) • The final report does not match the content of the in-class project • Mechanics - the template is ignored and the overall meaning is not clear • Citation/References are missing completely • Paragraphs - are less than three sentences long and topic sentences are missing • Style - No attempt to write in a formal academic writing style • Grammar - Tense problems are clear. Hedging is non-existent. Most sentences contain article mistakes