SPA5000 Communication Skills for Physicists.

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Lecture 1 Introduction
Course outline

• Different types of communication
• The conventions of Scientific Writing
• Abstracts and summaries
• Skills and the role of the academic reference
• General advice on scientific writing
• Specific advice on writing
• Graphs and graphics
• Some guidelines on giving talks
• Introduction to Latex

• Additional:
  • Exercises (summaries, references, presentations)
  • Essay
Scientific Communication

• Definition of communication in English:
• noun

• 1 [NOUN] The imparting or exchanging of information by speaking, writing, or using some other medium:

From: http://www.oxforddictionaries.com/definition/english/communication
Various types of communication

• Written communication  
  • e.g. prose, equations etc.

• Oral communication  
  • e.g. during meetings, presentations etc.

• Visual communication  
  • e.g. diagrams, graphs, videos etc.

• Digital Communication

• Physicists have to be able to communicate irrespective of their career paths.
Written communication

• Formal articles – reports, papers, reviews, books

• Technical articles – software and hardware documentation

• Informal articles – media articles, blogs, essays

• Short communication – letters, memos
Oral communication

• Formal presentations – conferences, interviews, viva voce examinations (vivas)

• Informal presentations – project updates and reports

• Technical communications – instructions, training

• Discussions – group and one-to-one
Visual communication

• Posters

• Talk slides

• Images and graphics: graphs, diagrams

• Videos
Digital communication

• Web pages

• Blogs

• Social networks (micro blogging, wechat)

• Video

• Computer Code
...useful irrespective of career

• writing reports

• writing documentation

• writing briefing and advisory papers

• communicating arguments and decisions

• selling ideas, proposals and products
Types of scientific writing

• Reports on a single experiment or a series of experiments
• Meeting reports
• Project reports
• Progress reports
• Technical documentation

• Journal publications
• Newspaper articles
• Books
• Reviews
• Essays
• looking for opportunities such as internships and jobs
Scientific writing should be:

• Clear and concise

• Properly targeted to the particular audience

• Accurate

• Logically and well presented

• Not too long and not too short

• Grammatically correct
Narrative

• There should be a logical flow to the writing. It should tell a story, with a beginning, middle and an end. Unnecessary digressions should be avoided. This means that often some material may have to be omitted or consigned to the appendices.

• See: “General advice on writing”