

## **JEE 701/JEE711 Research Communication**

**(Course coordinator: Dr. Sebastien Bonnet)**

**1. Course Description** *[Briefly describe the course content, especially how it supports the PLO].*

The objective of the course is to enhance the capabilities of students in extracting information from technical papers and reports, as well as in writing scientific papers and making academic presentations. At the beginning of the course, classes are devoted to provide (1) guidelines and techniques to extract and analyze information from scientific publications, (2) research methods and tools to search, manage and generate bibliographies (Mendeley; Google Scholar; Science Direct; etc.) and (3) guidelines for paper writing and oral presentation. These classes delivered during live classroom sessions are accompanied with online teaching materials and guidance. Students will be required to work independently, as well as to interact with other students, researchers and academic staff as part of a process of exchange of ideas and information.

**2. Target Knowledge, Skills, and Abilities (KSA)** *[Indicate what KSA this course will provide the students with].*

This course provides students with knowledge about the concept of research communication, skills to select, read and write research papers as well as to prepare academic presentations with adequate style in English, and an ability to communicate and interact with other researchers in an international environment.

**3. Target group of students** *[Indicate if the course is opened for all students, including non-degree ones]*

The course is opened to Master and PhD students with a background in science or engineering.

**4. Pre-requisites** *[Indicate if the course requires some pre-requisites].*

This course does not require any pre-requisites.

**5. Course Learning Outcomes** *[Indicate the alignment of CLOs with the PLOs].*

CLO 1: Able to search, select and critically read research papers

CLO 2: Able to write a research paper in English with adequate format and style

CLO 3: Able to prepare and deliver a presentation in English in front of an international audience

**6. Method of Teaching and Learning** *[Specify if it would be 1/ Online; 2/ On-site; 3/ Hybrid; 4/ Online for lectures and On-site in small groups for discussions and workshops; 5/ Others].*

This course will be delivered in a hybrid format, i.e. a combination of online and on-site lectures and presentations.

**7. Course Outline and Organization** [Following KMUTT's recommendations, a course should be organized based on the OBEM approach. A course can, therefore, be split over the semester, but also organized in consecutive weeks as before. A module can contain from 2 up to a maximum of 5 lectures depending on the target LOs. A 3 credits course can be composed of 3 to a maximum of 5 modules. In addition, indicate if **the course is opened every Semester or a specific Semester**].

This course is opened every Semester. For the Semester 1/2022 (2565), this course is scheduled every Thursday morning (9.00 am – 12.00 pm) from Thursday 11 August to 8 December 2022.

<b>MODULE 1: PAPER SELECTION, BIBLIOGRAPHY AND JOURNAL SUBMISSION</b>		
<b>MLO 1:</b> Can use search engines to screen and select research papers, books and other documents		
<b>MLO 2:</b> Able to critically read papers and select relevant information		
<b>MLO 3:</b> Able to use reference management tools to build a bibliography and reference documents		
Lecture No.: Title	Name of Instructor	Teaching Period
<b>LECTURE 1:</b> Techniques to screen and read scientific papers	Dr. Sebastien Bonnet	11 Aug. 2022
<b>LECTURE 2:</b> Building a bibliography: Search engines and Mendeley reference manager	Dr. Sebastien Bonnet	18 Aug. 2022
<b>LECTURE 3:</b> Journal selection and peer review process	Dr. Sebastien Bonnet	25 Aug. 2022
<b>EVALUATION:</b> Take-home work: Preparation of bibliography for review paper		

<b>MODULE 2: WRITING A RESEARCH PAPER</b>		
<b>MLO 1:</b> Understand the concept of a research paper		
<b>MLO 2:</b> Can write a research paper using adequate format and style		
<b>MLO 3:</b> Can discuss and analyze scientific contents critically		
Lecture No.: Title	Name of Instructor	Teaching Period
<b>LECTURE 1:</b> Composition and style of a scientific paper	Dr. Sebastien Bonnet	1 Sep. 2022
<b>LECTURE 2:</b> Guidelines to format a scientific paper	Dr. Sebastien Bonnet	8 Sep. 2022
<b>LECTURE 3:</b> Writing a scientific paper: Hands-on practice	Dr. Sebastien Bonnet/ Prof Robert H. B. Exell	22 Sep. 2022
<b>Lecture 4:</b> Writing a scientific paper: Hands-on practice	Dr. Sebastien Bonnet/ Prof Robert H. B. Exell	28 Sep. 2022
<b>EVALUATION:</b> Take-home work: Preparation of review paper		

<b>MODULE 3: PREPARING AND DELIVERING AN ACADEMIC PRESENTATION</b>		
<b>MLO 1:</b> Understand the concept of an academic presentation		
<b>MLO 1:</b> Can prepare an academic presentation with adequate format and style		
<b>MLO2:</b> Can present academic work in English in front of an international audience		
Lecture No.: Title	Name of Instructor	Teaching Period
<b>LECTURE 1:</b> P Preparing and delivering a presentation: What to do and not to do	Dr. Sebastien Bonnet	6 Oct. 2022
<b>LECTURE 2:</b> Preparing a presentation: Hands-on practice: Part 1	Dr. Sebastien Bonnet/ Prof Robert H. B. Exell	13 Oct. 2022
<b>LECTURE 3:</b> Delivering a presentation: Hands-on practice: Part 2	Dr. Sebastien Bonnet/ Prof Robert H. B. Exell	20 Oct. 2022
<b>EVALUATION:</b> Take-home work: Preparation & presentation of research paper		

**8. Evaluation Methods** [*Indicate the methods used to evaluate the LOs, e.g. online or on-site exams, assignments, take-home exams, projects, etc. Following KMUTT recommendations, the LOs evaluation should be organized at the end of each module*].

**Module 1:** Take-home work: Preparation of bibliography for review paper (10% overall grade of course)

**Module 2:** Take-home work: Preparation of review paper (60% overall grade of course)

**Module 3:** Take-home work: Preparation & presentation of research paper (30% overall grade of course)

**9. Guided References/Resources** [*Indicate the references/resources students are recommended to consult for the modules/course*].

1. Bonnet, S. (2022) *All you need to know for writing and publishing a scientific paper*, The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi, ISBN: 978-974-456-819-9.
2. Exell R.H.B (2006) *Research methodology*, King Mongkut's University of Technology Thonburi, ISBN 974-456-658-2, December 2006.