

Course memo (Kurs PM) for MH2450 International Seminar in Materials Processes

TTMVM1-IMTA, 2020, Autumn semester, periods 1-2.

This course provides an introduction to principles and techniques of scientific communication and research and development. In the course, students will receive training in various communication media, project management and research and development practices. Students will also perform a project lasting approximately 120 hours and present the findings at an international seminar.

Contents and learning goals

Course contents

The course consists of a major project aiming to provide a deepened understanding of Materials Science and Process Design together with training in general engineering abilities.

The different projects should deal with problems within Science and Process Design, integrating technical aspects and society's demands as to laws and regulations, ethics, economy and environment.

The course responsible provides suitable projects and a special supervisor is assigned to each project. It is possible to suggest projects, but a KTH supervisor is always assigned. The work is done individually or in groups of 2-3 participants.

The project should contain the following parts:

- Project planning
- Project meetings, possibly with the supervisor (about 1 h/week)
- A literature survey
- Performing experiments, calculations and similar
- Analysis and conclusions
- Written report
- Oral presentation

Intended learning outcomes

After successful completion of the course, students should be able to:

- Plan and manage a technical project
- Write a scientific report within a specific area of materials and process design
- Present a scientific report in writing and orally in national and international seminars

- Oppose presentations of equivalent scientific reports
- Relate to and discuss society's expectations concerning ethics, economy and environment

Organisation of teaching in the course

The course consists of five (5) non-mandatory lectures/workshops non-mandatory one (2) mandatory short seminar within KTH and one mandatory long seminar including international partners. Students are also expected to perform a project lasting approximately 120 hours during the course.

The non-mandatory lectures provide information and discussion, which is complemented by information uploaded to the online Learning Management System. It is highly recommended that students attend all sessions.

The short seminar allows students to present their projects to the rest of the class and allows the examiner to ensure that all projects are suitable and can fulfil the course goals.

The project allows students to apply the knowledge they have gained from the master's programme to active research topics and to practice planning and executing a research plan. Presenting the findings is intended to allow students to explore, experiment with and practice communication techniques.

Assessment of the project is by written report, oral presentation and poster. This is intended to allow students the opportunity to demonstrate their knowledge, practice three forms of communication. It is also expected that you will oppose a project performed by a student/group from another university.

Relevance to programme goals

MH2450 contributes to the following goals of the Engineering Materials Science master's programme:

Knowledge and understanding

- Have such a knowledge that he/she is able to work within material-related industries within research and develop as well as in production and manufacturing
- Have good insights in current research and development work and industrial development trends.

Skills and abilities

- Be able to identify, formulate, analyze and solve problems with regards to current conditions (scientific, engineering-related and social) from an ethical and professional standpoint.
- Have a good ability to utilize modern modelling and simulation methods and their applications
- Have the ability to, within presentation and communication, be able to carry out an efficient work individually, as well as in groups.

- Show the ability to create technical solutions which meet the needs of people and society
- Show the ability to critically, creatively and independently plan and, with adequate methods and tools, create relevant products, processes and systems within a given timeframe and, with that, contribute to knowledge development and also evaluate the work
- Take a responsibility for and show the ability to actively contribute to an effectively functioning team and collaborate with groups with different backgrounds

Ability to make judgements and adopt a standpoint

- Show a professional and ethical responsibility in scientific, technical, ecological, and social organisations
- Have understanding that engineering-related problems, seen in a system perspective, are often complex, can be incompletely defined, and sometimes contain contradictions
- Show such an ability which is required to participate in research and development work or for an independent work in other qualified technical activities
- Show insights about technology's possibilities and limitations, its role in society and human responsibility for how it is used, including social and economical aspects and environmental and workplace environment aspects
- Be aware of, and show a feeling for the responsibility and the ethical standpoint which must be taken during development of new materials and processes
- Show the ability to identify one's need for further knowledge and continuously develop one's own competence

The sustainable development issues studied in this course have a significant impact on society, since the metals industry is one of the most polluting industries. Therefore, any improvements are likely to have a large impact on the world. This course contributes to sustainable development goals of the programme, namely United Nations Sustainable Development Goals 9 and 13.

Teaching language

The entire course and all examinations shall be conducted in English.

Detailed schedule

Day	Date	Start	End	Location	Activity	Teacher	Description
Friday	2020-09-04	1300	1500	Digital	Introduction	Chris Hulme-Smith	Introduction and project pitches
Friday	2020-09-11	1300	1500	Digital	Lecture/workshop	Lina Andrén (KTH library)	Research tools and techniques
Friday	2020-09-18	1300	1500	Digital	Lecture	Chris Hulme-Smith	Project planning and graphic design
Friday	2020-10-02	1300	1500	Digital	Problem formulation Seminar	Chris Hulme-Smith	
Tuesday	2020-10-06	1000	1200	Digital	Lecture	Chris Hulme-Smith	Oral communication
Friday	2020-10-09	1300	1500	Digital	Lecture	Chris Hulme-Smith	Written communication
Thursday-Friday	2020-11-19/20	All	Day	Digital	Final seminar	Chris Hulme-Smith	

To prepare for each session, please review the relevant material on the online learning management system. This material will be the basis of the classes.

Key concepts

Scientific communication, project management, project planning, research techniques

Vetenskaplig kommunikation, projektmanagement, projektplanering, forskningstekniker

Course literature and preparation

Special Requirements

None.

Recommended prior knowledge

Students must have understanding of materials science, at a level that allows them to execute their chosen project.

Equipment

Project-dependent and specified by the project supervisor. From a course perspective, only a standard personal computer or laptop computer is required (although this can be provided by prior arrangement if required): students must be able to write a scientific report, make and deliver a slide show and create a poster.

Course literature

There is no literature recommended in general for this course, although some resources for specific parts of the course are recommended on the Learning Management System.

Reading instructions

All necessary information is provided during the course, with the exception of the topic studied in the research project. This shall be provided by each project supervisor on an individual basis. If this is a problem, please contact the course leader, Chris Hulme-Smith.

Disabilities

If you have a disability, you can get support from “Funka”:

<https://www.kth.se/en/student/studentliv/funktionsnedsattning/funka-stod-for-studenter-med-funktionsnedsattningar-1.953214>

Also inform the course leader if you have special requirements. Provide a certificate form “Funka”.

Examination and completion

Grading scale

The course is graded A-FX, F, based on points gained for the home exam, project written report and project oral presentation.

Examination

Project (PRO), 6.0HP

Other requirements for course completion

None

Examiner

Christopher Hulme-Smith

Ethical approach

- During any group work, everyone in the group is responsible for the group's work.
- During the examination, each student must honestly report the help received and the sources used.
- At the oral examination, each student must be able to account for the entire assignment and the entire solution.

Goal-oriented grading and assessment criteria

All intended learning outcomes are assessed through the project (PRO).

Examination details

The course is examined by the final project, which is graded on six occasions:

1. Problem formulation slides
2. Written report
3. Slides submitted for the final seminar
4. Poster
5. Presentation at the final seminar
6. Submission of an opposition report

If a student is unable to participate in either the problem formulation seminar or the final seminar, it is possible to present the same content on a different occasion. This should be discussed with the examiner if needed.

It is not possible to replace the written report, poster or the slides submitted for either the problem formulation seminar or the final seminar or the home exam. If a student is unable to attend the final seminar and does not oppose a group, an additional exercise may be completed in lieu of the opposition report. If a student is unable to attend the seminar at short notice and completes an opposition report, it may be submitted even if the student does not attend the seminar.

The results of the project will be reported in Ladok. Results of the individual parts of the project (viz. each grading criterion for the written report and oral presentation) will not be reported in Ladok but will be reported to students in the Learning Management System.

Completion of course

The written report, final seminar slides and poster may be attempted again if a grade of FX is achieved or additional exercises set to test competence, at the sole discretion of the examiner. All parts of the examination may be carried forward to future course offerings if the course cannot be completed in the original offering, subject to all applicable rules for doing so at KTH.

Possibility of replacement tasks

If a student is not able to attend a mandatory seminar, he or she may present the same content on another occasion, at the discretion of the examiner, on the understanding that the course may not be completed until such a presentation has been given and that it may not be possible to convene a suitable audience until after the normal date of completion of the course.

Possibility of grade improvement (“plussning”)

At the time of writing, there is no possibility to improve grades after completion of the course, in line with KTH policy.

If the course is changed or withdrawn

If the examinations are changed, the transitional provisions in the syllabus will define how those who have old exams will be examined.

When the course is no longer given, the student has the opportunity to be examined for another two academic years.

Additional information

Other regulations

Learning management system

For this course, Canvas is used as the learning management system.

Course given by

Materials Science and Engineering, School of Industrial Engineering and Management. Please contact ITM Expedition North (Brinellvägen 66-68) for assistance with registration, de-registration or exam-related issues.

Teachers

The course leader, main teacher and examiner is Dr Christopher Hulme-Smith, chrihs@kth.se.

During the course, a session on research techniques will also be taught by Lina Andrén, linaandr@kth.se (KTH library).

Communication with teachers

Chris Hulme-Smith can also be contacted by email or in person at Brinellvägen 23 (Bergs) office K121. If necessary, students may also contact Anders Eliasson or Anders Tilliander for general queries about project management and research, although both are not directly involved in the course and so will not be able to answer queries specific to the course itself. Mattia de Colle may also be contacted to discuss scientific communication.

Course evaluation and course analysis

The course is evaluated using an online form sent to students after the final grades are distributed. The data gathered from the student feedback are analysed soon after they are gathered. Findings are published on the course web. Students may also send suggestions or comments directly to the course leader.

Changes for this course offering

Students in previous years suggested that projects could start slightly earlier to allow a less hectic schedule. This has been attempted, but is restricted by the limitations of the timetable. Within the course, projects are chosen in less time and can be started approximately one week earlier than in the previous course offering.

Supplementary

None

Grading criteria

Problem formulation slides

Criteria	Ratings	Pts
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<p>This criterion is linked to a learning outcome</p> <p>Description of criterion</p> <p>Submit slides for presentation that cover the following information:</p> <ul style="list-style-type: none"> - introduction of your project - project supervisor(s) - background to the project - project aims and goals - an initial project plan - methods you are likely to use in the project - consideration to ethical, environmental and economic impact of your project and/or the topic in general. 				4.0 pts
<p>4.0 Pts Good</p> <p>Slides with all or nearly all relevant information are uploaded to Canvas by the main deadline. The slides contain all the information requested, together with the context of the project within materials science.</p>	<p>2.0 Pts Acceptable</p> <p>Most of the requested information is included, without good explanation or context. Alternatively, the slides are submitted after the deadline.</p>	<p>0.0 Pts Incomplete</p> <p>Slides are not uploaded to Canvas, or the a significant amount of required information is missing from the slides.</p>		

Criteria	Ratings		Pts
<p>This criterion is linked to a learning outcome</p> <p>Description of criterion</p> <p>The slides are presented at the Problem Formulation Seminar</p>			
	<p>1.0 Pts Complete</p> <p>The presentation is given.</p>	<p>0.0 Pts Incomplete</p> <p>No presentation is given.</p>	1.0 pts
Total points: 5.0			

Written report

Criteria	Ratings						Pts
<p>This criterion is linked to a learning outcomeLanguage</p>							<p>10.0 pts</p>
	<p>10.0 Pts Excellent The report is concise, enjoyable to read and very informative. The language is perfect and efficient. All scientific conventions have been followed. The language is of the standard seen in good scientific journals.</p>	<p>8.0 Pts Very good The report may contain errors, but none of them affects how easy it is to understand the content. Scientific conventions have been followed in most places.</p>	<p>6.0 Pts Good There are some mistakes, but it is generally easy to understand the meaning of the report. Scientific conventions are followed in most places.</p>	<p>4.0 Pts Acceptable There may be some mistakes in the language and some points may not be very clear, but the report can generally be understood. Some effort has been made to obey scientific conventions.</p>	<p>2.0 Pts Poor There are major mistakes in the language and the report is difficult to understand, but some information can be obtained.</p>	<p>0.0 Pts Fail There are so many problems with the language that no information is communicated.</p>	

Criteria	Ratings						Pts
<p>This criterion is linked to a learning outcome</p> <p>Content</p>							15.0 pts
	<p>15.0 Pts Excellent The report contains all required sections and the ideas communicated are original and insightful. The contents of the paper are suitable for publication in a good scientific journal.</p>	<p>12.0 Pts Very good The project contains all required parts. The ideas included in the report are interesting and well-researched. The work could form the basis of a scientific publication.</p>	<p>9.0 Pts Good The report is not missing more than one or two required sections. The content is interesting and has been researched in detail. Ideas from the report could be used in future work to form the basis of a scientific publication,</p>	<p>6.0 Pts Acceptable Some required sections are missing, but the report manages to communicate interesting and logical research.</p>	<p>3.0 Pts Poor The report has major problems. Sections may be missing. The science presented in the report are factually incorrect or irrelevant to the problem statement. The report does not successfully communicate any research.</p>	<p>0.0 Pts Fail The report is not submitted or is missing so much content that it cannot be understood at all. It fails to communicate any significant information.</p>	

Criteria	Ratings				Pts
<p>This criterion is linked to a learning outcome Figures, tables, etc.</p>	<p>10.0 Pts Excellent Figures are of high quality and make a substantial contribution to the report. They could be published in a high-quality scientific journal with little editing. Any potential copyright issues have been mentioned.</p>	<p>6.0 Pts Good Figures are included and are generally correct and useful. Some figures may be included without citations or any mention of the necessary permissions.</p>	<p>2.0 Pts Acceptable Figures contribute to the report but are not used as well as they could be. Some figures may be difficult to read/understand or may not be referenced correctly in the text.</p>	<p>0.0 Pts Fail Figures do not make any significant contribution to the report.</p>	<p>10.0 pts</p>

Criteria	Ratings				Pts
<p>This criterion is linked to a learning outcome</p> <p>Citations</p>	<p>5.0 Pts Excellent Citations are used appropriately and are consistent with current scientific standards. They could be used for an article in a good-quality scientific journal.</p>	<p>3.0 Pts Good A serious attempt has been made to include useful and appropriate citations. There may be some citations missing, or many unnecessary citations. The citations may be inconsistent in style or not include all the relevant information, but the original source can generally be found with little effort.</p>	<p>1.0 Pts Poor There are citations in most places where they are needed, but there is not enough information to find the sources easily or citations are missing in many places where they are needed.</p>	<p>0.0 Pts Fail No serious attempt has been made to include citations. Citations may be so badly written that it is very difficult to find the original source,</p>	5.0 pts
Total points: 40.0					

Slides submitted for final seminar

Criteria	Ratings				Pts
<p>This criterion is linked to a learning outcome</p> <p>Slideshow structure</p> <p>The overall plan of the slideshow, with different sections as required.</p>	<p>3.0 Pts Excellent</p> <p>The structure is clear and logical. It follows normal scientific conventions and the audience can understand the format easily. It is appropriate for the scientific content you will deliver.</p>	<p>2.0 Pts Good</p> <p>The structure is clear and logical, but may have some minor problems that could confuse an audience, such as out-of-order information or missing sections.</p>	<p>1.0 Pts Acceptable</p> <p>The structure is clear, but may not be the best choice for the content; alternatively, some parts of the structure are clear and appropriate whereas others are not clear and/or appropriate. Some significant areas may be missing, but most of the required information is presented.</p>	<p>0.0 Pts Fail</p> <p>There is no obvious structure, or the structure is inappropriate for the content of the presentation. Alternatively, many sections are missing and the slides make no logical sense as a result.</p>	<p>3.0 pts</p>

Criteria	Ratings				Pts
<p>This criterion is linked to a learning outcome</p> <p>Overall content of slides</p> <p>The content, layout, design and use of different elements within slides throughout your presentation. This does not assess the scientific quality of the slide contents.</p>	<p>5.0 Pts Excellent Your slides are easy to understand and complement your spoken words very well. The use of images and text is clear. The amount of information is appropriate for the length of time the slides are displayed.</p>	<p>3.0 Pts Acceptable Your slides are sometimes clear, but are also sometimes difficult to understand, either because you include too much information on some of them, the text is too small, images are pixelated/distorted, you use images when it is not useful, etc.</p>	<p>1.0 Pts Poor It is possible to follow your slides, but it is not easy. You may have used too much text on each slide, or images that are not very clear. Significant improvements are possible.</p>	<p>0.0 Pts Fail In general, your slides are extremely difficult to follow. This may be due to the amount of information you include in each slide, the size of the text, the use of confusing images, etc.</p>	<p>5.0 pts</p>

Criteria	Ratings			Pts
<p>This criterion is linked to a learning outcome Citations and acknowledgements</p> <p>The inclusion of citations for all content that is not your original work; acknowledgements are given for appropriate support</p>	<p>2.0 Pts Excellent Your acknowledgements are appropriate and contained in the correct place in the slideshow. You provide clear citations to all work that is obviously taken from elsewhere.</p>	<p>1.0 Pts Acceptable You provide clear citations for most work that is clearly not your own original work; you may have missed one or two elements that must be accompanied by citations or your citations are not completely clear, but some attempt has been made to provide the relevant information. Your acknowledgements are good, but might include things that do not need to be acknowledged or may be in the wrong place in the slideshow.</p>	<p>0.0 Pts Fail You give no citations for content that is obviously not your original work; you give acknowledgements for things that are completely unnecessary.</p>	<p>2.0 pts</p>

Criteria	Ratings			Pts
<p>This criterion is linked to a learning outcome</p> <p>Slide design</p> <p>The overall design of your slides, not including the content of individual slides.</p>	<p>3.0 Pts Excellent Your slides have been designed to be clear, easy to read and to draw the audience's attention to the most important information contained in each slide.</p>	<p>1.0 Pts Acceptable The slides are quite clear and can be understood, but you have not made it any easier to understand the content by choosing a good layout. This may include some unnecessary information on each slide (header and footer), a bad choice of colour scheme or typeface/font.</p>	<p>0.0 Pts Fail There is no thought given to design for scientific communication. You have used inappropriate slide design, such as slides with too many unnecessary additions, such as pictures or text in the header and footer that detract from the ability of the audience to understand your scientific content. Your choice of colour scheme or typeface/font make it very difficult to understand the content of your slides.</p>	3.0 pts

Criteria	Ratings				Pts
<p>This criterion is linked to a learning outcome</p> <p>Scientific content</p> <p>The quality of the science included in your slides. This is assessed independently of the design of your slides.</p>	<p>5.0 Pts Excellent</p> <p>The slides contain a large amount of logical and easy-to-understand information that is scientifically correct.</p>	<p>3.0 Pts Good</p> <p>Slides contain some scientific content and are fairly easy to understand, although some may be incorrect or may not be clear.</p>	<p>1.0 Pts Poor</p> <p>There is little scientific content that can be understood from the slides, but some attempt has been made to present valid findings.</p>	<p>0.0 Pts Fail</p> <p>The slides contain almost no scientific content or are so unclear that they cannot be understood easily.</p>	5.0 pts
Total points: 18.0					

Oral presentation at final seminar

Criteria	Ratings			Pts
<p>This criterion is linked to a learning outcome Audience engagement Whether or not you engage the audience in your presentation. This can take many forms and no particular method is required to achieve engagement, but is an essential part of any presentation.</p>	<p>2.0 Pts Excellent The audience feels part of your presentation and pays attention to you as a result. The audience feels as if the presentation is for them.</p>	<p>1.0 Pts Good Some attempt is made to engage the audience and make them feel involved in the presentation.</p>	<p>0.0 Pts Poor No attempt is made to engage the audience in the presentation. The speaker(s) go through their slides without connecting to the audience and the audience is bored as a result.</p>	<p>2.0 pts</p>

Criteria	Ratings			Pts
<p>This criterion is linked to a learning outcome Response to questions How you deal with questions from your opponents and the audience.</p>	<p>2.0 Pts Excellent Questions are answered concisely, efficiently and in an interesting way. If you are unable to answer, you discuss the question with the person asking it and reach a conclusion in an academic way.</p>	<p>1.0 Pts Good The questions are answered to some extent or a discussion is started with the person asking the question (and some conclusion is then reached).</p>	<p>0.0 Pts Poor The questions are not answered in any scientific way and no attempt is made at discussion.</p>	2.0 pts
<p>This criterion is linked to a learning outcome Speech and language How well your voice is heard, including how easy it is to understand technical words</p>	<p>1.0 Pts Good You voice can be heard and all technical terms can be easily understood.</p>	<p>0.0 Pts Poor You are too loud or quiet so that the audience cannot hear you. Alternatively, the audience struggles to understand key terminology because of your voice.</p>		1.0 pts

<p>This criterion is linked to a learning outcome</p> <p>Content</p> <p>The scientific content of your presentation, excluding the content of your slides (assessed separately).</p>	<p>5.0 Pts Excellent</p> <p>The content of the presentation (excluding the slide show) is perfect for the audience. It is neither too basic nor too complex. Therefore, the audience feels both interested in the topic and learns new science. The science in the presentation is completely correct. The presentation is suitable for a major scientific conference for an audience of similar knowledge.</p>	<p>4.0 Pts Very good</p> <p>The content of the presentation (excluding the slide show) is almost perfect for the audience. It is generally not too basic, although some parts of the presentation may be explained in unnecessary detail. Similarly, some advanced terms may be used without enough explanation. The audience is interested and learns something, but might be a little frustrated with the level of the presentation. The science contained in</p>	<p>3.0 Pts Good</p> <p>The content of the presentation (excluding the slide show) is good for the audience. Most of the content is appropriate, but some ideas may either require more explanation or be too basic to be interesting for the audience. The science may contain some errors, but still has value. With significant change, the presentation will be suitable for a major scientific conference for an audience similar to that</p>	<p>2.0 Pts Good</p> <p>The content (excluding the slide show) fails to engage the audience, overall but does so in places. Major sections of the presentation are either too basic or too complex. As a result, the audience is either slightly bored or confused by the end of the presentation. However, parts of the presentation succeed in engaging the audience. Alternatively, there may be major scientific flaws in the presentation.</p>	<p>1.0 Pts Poor</p> <p>The presentation (excluding the slide show) almost completely fails to engage the audience. The scientific content is either completely incorrect, far too basic or far too difficult for the audience. As a result, no information is communicated.</p>	<p>0.0 Pts Fail</p> <p>No presentation is made, or the presentation is of such poor quality as to communicate precisely zero information.</p>	<p>5.0 pts</p>
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the presentation contains no major errors. The presentation may be suitable for an audience of a slightly different level of knowledge, or may be perfect with minor changes.

in the seminar.

Criteria	Ratings			Pts
<p>This criterion is linked to a learning outcome</p> <p>Timekeeping How well you keep to the specified time during your presentation.</p>	<p>2.0 Pts Excellent The presentation is the correct length, within a reasonable error margin.</p>	<p>1.0 Pts Good The presentation is slightly outside a reasonable range of time.</p>	<p>0.0 Pts Poor The presentation is significantly too long or too short.</p>	2.0 pts
Total points: 12.0				

Poster

Criteria	Ratings	Pts
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<p>This criterion is linked to a learning outcome</p> <p>Overall layout</p> <p>The overall use of space, font size(s) and images in the poster to help communicate your scientific content</p>					<p>6.0 pts</p>
<p>6.0 Pts Excellent</p> <p>The layout of the poster is logical and clear. It guides the reader through your content in a way that makes it easy to understand the information. The poster is easy to read at a distance of several metres. The use of images, tables and graphs is excellent and adds a good amount of information in a very easy-to-understand way.</p>	<p>4.0 Pts Good</p> <p>There is a good balance between amount of content and ease of reading. Most of the poster is easily readable at a distance of several metres, but some elements cannot be read at such a distance. There are some non-text elements that add to the information in the poster, but these could either be made more effective or should be more in number.</p>	<p>2.0 Pts Poor</p> <p>Some non-text elements are used, but not in a way that adds a lot of information to the text content of the poster. Some elements can be read at a distance of several metres, but most is too difficult to read unless the reader is close to the poster. There is some use of space and arrangement of text and images, but this could be improved significantly.</p>	<p>0.0 Pts Fail</p> <p>It is not possible to read the poster unless you are within one metre of it. There is so much content that it is very difficult to understand or there is so much empty space that not enough information is contained in the poster to make any sense.</p>		

<p>This criterion is linked to a learning outcome</p> <p>Use of design concepts</p> <p>The use of colour, contrast and other graphical design concepts to help communicate the scientific content of your poster</p>	<p>6.0 Pts Excellent</p> <p>There is clever use of design concepts in the poster that make it easy to follow the scientific content in a logical and clear way. Where necessary, colour and patterns have been used to guide the user and/or to show differences and similarities in the scientific content of the poster. The poster is a pleasure to read and informative from several metres away.</p>	<p>4.0 Pts Good</p> <p>Some design concepts have been used to help the reader follow the scientific content of the paper. In some ways, the information could be communicated more clearly by using colour or a different layout, but the poster is efficient overall.</p>	<p>2.0 Pts Poor</p> <p>One or two design concepts are used to make the scientific content of the report easier to understand, but significant improvements are still possible by using more design concepts.</p>	<p>0.0 Pts Fail</p> <p>There are no design concepts used in the poster. The poster is almost entirely a block of plain text with few or no images. There is little or now use of colour and no obvious order to the information.</p>	<p>6.0 pts</p>
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Criteria	Ratings			Pts
<p>This criterion is linked to a learning outcome Citations, title and personal information</p> <p>The use of citations, acknowledgements, title, author information to support the main content of your poster and communicate this vital information to the audience.</p>	<p>4.0 Pts Excellent The title is clear, concise and descriptive, an appropriate number of citations have been included with appropriate bibliographic information, author names are clearly displayed and any necessary acknowledgements are clear but not intrusive. No unnecessary authors, citations or acknowledgements are included.</p>	<p>2.0 Pts Acceptable The title is too long or not easy enough to read; author names are difficult to find or unclear; there are too few citations, or citations are included unnecessarily, unnecessary acknowledgements are included; these elements take up a disproportionate amount of space on the poster.</p>	<p>0.0 Pts Fail There are no citations or information that is obviously taken from other sources is not credited to the original authors. It is not possible to identify authors. There is no obvious title.</p>	4.0 pts

Criteria	Ratings			Pts
<p>This criterion is linked to a learning outcome</p> <p>Scientific content</p> <p>The scientific usefulness of the poster, including the presentation performed during the online seminar. A large amount of scientific content is not required to get full credit for this criterion.</p>	<p>4.0 Pts Excellent</p> <p>The poster contains logical and clear scientific content, with the quantity of content appropriate to the subject matter and the design of the poster.</p>	<p>2.0 Pts Acceptable</p> <p>Good scientific content is presented, but is either unclear or is not an appropriate quantity - either very little or too much.</p>	<p>0.0 Pts Fail</p> <p>The poster contains no scientific content or is so difficult to follow that it cannot be understood by readers.</p>	4.0 pts
Total points: 20.0				

Opposition report

Criteria	Ratings				Pts
<p>This criterion is linked to a learning outcome</p> <p>Description of criterion</p>	<p>5.0 Pts Complete The opposition report discusses the strengths and weaknesses in the research report you are assigned. At least one suggestion for improving the work is made. The questions are meaningful and relevant to the work.</p>	<p>3.0 Pts Good A concise summary of the report you are asked to oppose is submitted. Several relevant and clear observations are made, but strengths and weaknesses of the project are not clearly identified. Several questions that can be asked in the final seminar are included.</p>	<p>1.0 Pts Acceptable A summary of the report you are asked to oppose is submitted, together with some basic comments and at least one question that could be asked.</p>	<p>0.0 Pts Incomplete No report is submitted, or the report is severely lacking in detail. Questions are irrelevant or not at all useful. No attempt is made to offer suggestions to improve the work.</p>	5.0 pts
<p>Total points: 5.0</p>					