

## COURSE SYLLABUS

MD627 893, MD627 994 Seminar in Medical Microbiology [2(2-0-4)]

MD627 101 - 105 Peer Review in Medical Microbiology Research I-V [1(1-0-2)]

**Responsibility:** Department of Microbiology, Faculty of Medicine, Khon Kaen University

**Period:** Second semester, Academic year 2025

**E-learning:** <https://e-learning.kku.ac.th/course/view.php?id=85>

### Course coordinators:

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\*If you have any problem with the course or e-learning, please contact Dr. Chukkris, Dr. Auttawit, or Dr. Sakawrat via e-mail or at department.

**Students:** Graduate students in Precision Medical Microbiology Program, Faculty of Medicine, Khon Kaen University

### Date & Time:

	9.00-10.00	10.00-11.00	11.00-12.00	12.00-13.00	13.00-14.00	14.00-15.00	15.00-16.00
Mon							
Tue							
Wed		Seminar	Peer review				
Thu							
Fri							

**Venue:** Lecture Room #4 (Near the Pharmaceutical canteen), Faculty of Medicine, Khon Kaen University

## Course description

### **MD627 994 Seminar in Medical Microbiology [2(2-0-4)]**

Selecting topics, literature search and review, reading scientific reports with critical appraisal, presentation, and participation in discussion on research progress in biomedical science

### **MD627 101 Peer review in medical microbiology research I [1(1-0-2)]**

Principles of good peer review, Research summary and presentation, Discussion on medical microbiology research, Improvements of thinking process, creativity, and questions to ask in medical microbiology research, Scientific communication with critical thinking

### **MD627 102 Peer review in medical microbiology research II [1(1-0-2)]**

Experimental design for research, Research summary and presentation in written and oral communication, Discussion on medical microbiology research, Improvements of thinking process, creativity, and questions to ask in medical microbiology research, Scientific communication with critical thinking

### **MD627 103 Peer review in medical microbiology research III**

Basic adjustment for better experimental design and findings, Research summary and presentation in written and oral communication, Discussion on medical microbiology research, Expressing the opinions and suggestions for own research and others, Improvements of thinking process, creativity and

### **MD627 104 Peer review in medical microbiology research IV [1(1-0-2)]**

Experimental study design and research finding analysis, Analyzing the research problems, and planning for solution, Research summary and presentation in written and oral communication, Discussion on medical microbiology research, Expressing the opinions and suggestions for own research and others, Improvements of thinking process, creativity, and questions to ask in medical microbiology research, Scientific communication with critical thinking

### **MD627 105 Peer review in medical microbiology research V [1(1-0-2)]**

Research evaluation, Manuscript writing for scientific research articles, Research summary and presentation in written and oral communication, Discussion on medical microbiology research, Expressing the opinions and suggestions for own research and others, Improvements of thinking process, creativity, and questions to ask in medical microbiology research, Scientific communication with critical thinking

## Course learning outcomes (CLOs)

### CLOs of SEMINAR

On completion of this course, the students will be able to

1. **Summarize and explain** knowledge and information from research literatures in Precision Medicine field
2. **Understand and interpret** the analyzed data (big data, statistical data, bioinformatics) from studies used in seminar presentation
3. **Summarize and explain** concept and design of the studies and experiments from studies used in seminar presentation
4. **Demonstrate** life-long learning and information literacy through participation and literature search
5. **Use** English for communication and present the topic in seminar presentation.
6. **Discuss and provide** criticisms and suggestions for his/her study topic and among classmates.
7. Demonstrate professional characteristics including time-control, punctuality, and academic honesty, class attendance
8. **Understand** of the novelty and impact of the study from the seminar presentation
9. **Demonstrate** the ethical behaviors such as citation for information sources

### CLOs of PEER REVIEW

1. Students can **analyze, interpret, and summarize** thesis data for professional public presentation.
2. Students demonstrate **essential skills for presentation** with good literature review, problem-solving, systemic thinking, critical thinking, criticism, as well as creativity.
3. Students demonstrate **English language skills** for information reading, progress report writing, and oral presentation.
4. Students demonstrate **professional characteristics** including independent thinking, respect for diverse opinions, and scientific communication in class.

## Course evaluation and assessment

### 1. Grading criteria for SEMINAR and PEER REVIEW

SEMINAR/PEER REVIEW for M.Sc. students	Grade
≥ 85%	A
≥ 80% to < 85%	B+
≥ 75% to < 80%	B
≥ 70% to < 75%	C+
≥ 65% to < 70%	C
SEMINAR/PEER REVIEW for Ph.D. students	Grade
≥ 90%	A
≥ 85% to < 90%	B+
≥ 80% to < 85%	B
≥ 75% to < 80%	C+
≥ 70% to < 75%	C

FOR SEMINAR and PEER REVIEW I, you will get grade A, B+, B, C+, or C in your transcript.

For PEER REVIEW II - V, you will get S (when your score ≥ B) or U (when your score < B).

### 2. Course assessment and requirement

#### Score ratio of SEMINAR

- Present performance 90% (Please see the rubric scoring criteria.)
- Class participation 10% (10 questions = 10%)

#### Score ratio of PEER REVIEW

- Present performance 90% (Please see the rubric scoring criteria.)
- Class participation 8% (5 questions = 8%)
- E-learning 2%

### Class attendance requirement

1. Students who want to postpone the presentation must ask permission from the course coordinators and can postpone only once for proper reason. Please inform the course coordinator 1 week before the presentation date.
2. Enrolled students who want to leave the class, please send the absence request in e-learning with the proper reason and advisor agreement. Students who **missed the class** for unexcused reasons and without informing the course coordinator **for more than 2 times**, the maximum grade will be received is **only B**.
3. Non-enrolled students who **missed the class** for unexcused reasons and without informing the course coordinator **for more than 2 times**, the special talk must be performed in the next semester of Seminar course.
4. Students who **join the class later than 10 minutes** after the beginning of the presentation will be **1 % subtracted** in each time.

### 3. Rubric scores of SEMINAR and PEER REVIEW

#### 3.1 Rubric scores of SEMINAR

Criteria	5	4	3	2	1
1. Understanding and summarization of content from the selected studies (15%)	The presented content provide -correct information -Key information that are extracted -Well summarized information - clear conclusion	The presented content provide -correct information - clear conclusion	The presented content correct but conclusion is not clear or not supported by the presented content	Some of presented content are incorrect and conclusion is not clear	The presented content are mostly incorrect and no conclusion is provided.
2. Logical sequence and integration of the content among studies (10%)	-Good logical sequenced information - The content from $\geq 2$ papers are well integrated in the same storyline	-Good logical sequenced information but the topic or content among studies are not aligned or integrated	-Although the content from each paper are well integrated, but non-logical sequence of information are shown	Although with the logical sequence of the content, unrelated studies are tied together	Poor sequenced information and unrelated studies are tied together
3. Ability to interpret the analyzed data (biostatistics, bioinformatics and/or big data) and research findings (10%)	-Correctly and clearly interpret all analyzed data -Be able to simplify the meaning of results	Most analyzed data were interpreted correctly but some information cannot simplify to understand easily	Some data were interpreted correctly, but still unclear	Most analyzed data were interpreted incorrectly	Incorrectly interpret in all analyzed data

Criteria	5	4	3	2	1
4. Ability to summarize the experiments and the concept design of the study (15%)	-The concept design (conceptual framework) and the experiments (study design) are well-explicated - Flowchart are provided - Additional information were provided to enhance the understanding to the audience	-The concept design and the experiments are provided - Flowchart are provided	Flowchart are provided but some information are missing (lack of either conceptual framework or study design)	Extracted information is shown, but mostly in copy and paste fashion	No experiments and the concept design of the study are provided
5. Clarity in presentation and media (10%)	- PPT and media are clear - Contain technique to emphasize and attractive - Proper speed - Clear voice, Language Pronunciation	- Media are clear -Clear voice, Language Pronunciation	- Media and content are clear - The voice are still unclear	- Media and content are clear for most content - The voice are still unclear	-Poor media and content, too small letter, low resolution figure -Unclear voice, language pronunciation
6. Appropriate on criticizing of paper (5%)	Well extracted many key strengths and weaknesses that affect or influence to the quality of the study	Provide key strengths and weaknesses but with limited number/ info	Provide general strengths and weaknesses	Provide only few numbers of general strengths and weaknesses	Not provide strengths and weaknesses
7. Response to question (15%)	Correctly response to all questions	Correctly response to most questions	Correctly response to some questions	Most question were incorrectly answered	Not response to question
8. Length (30 minutes) (5%)	Within 30 minutes	31-35 minutes	36-40 minutes	41-45 minutes	>45 minutes
9. Time for submission abstract and PPT file before the presentation date (5%)	7 days or more	6 days	5 days	4 days	3 days or less

### 3.2 Rubric scores of PEER REVIEW

Criteria	Ratio	CLO	5	4	3	2	1
Content and sequence of presentation	20%	1	<ul style="list-style-type: none"> <li>- Contain all prescribed contents (7 topics)</li> <li>- Correctly, clearly, concisely, and well-organized summarized details in all topics</li> </ul>	<ul style="list-style-type: none"> <li>- Contain 6 prescribed contents</li> <li>- Correctly, clearly, concisely, and well-organized summarized details in all topics</li> </ul>	<ul style="list-style-type: none"> <li>- Contain 6 prescribed contents</li> <li>- Correctly, clearly, concisely, and well-organized summarized details in almost of topics</li> </ul>	<ul style="list-style-type: none"> <li>- Contain 6 prescribed contents</li> <li>- Correctly, clearly, concisely, and well-organized summarized details in some topics</li> </ul>	<ul style="list-style-type: none"> <li>- Contain 5 or less than 5 prescribed contents</li> </ul>
Ability to interpret and analyze data	20%	1	<ul style="list-style-type: none"> <li>- Correct and clear in all analyzed data</li> <li>- Simplify all interpretations to audience</li> </ul>	<ul style="list-style-type: none"> <li>- Correct in all analyzed data</li> <li>- Simplify most of the interpretations to audience</li> </ul>	<ul style="list-style-type: none"> <li>- Correct in all analyzed data</li> <li>- Need to improve simplification</li> </ul>	<ul style="list-style-type: none"> <li>- Incorrect in some analyzed data</li> <li>- Need to improve simplification</li> </ul>	<ul style="list-style-type: none"> <li>- Incorrect in almost of the analyzed data</li> <li>- Need to improve simplification</li> </ul>
Quality of slides	10%	2	<ul style="list-style-type: none"> <li>- All slides are easy to read.</li> <li>- Free of spelling and grammatical errors</li> <li>- Appropriate animations and graphics.</li> </ul>	<ul style="list-style-type: none"> <li>- Most slides are easy to read.</li> <li>- Free of spelling and grammatical errors</li> <li>- Appropriate animations and graphics</li> </ul>	<ul style="list-style-type: none"> <li>- Some slides are difficult to read.</li> <li>- Have some spelling and grammatical errors</li> <li>- Inappropriate animations and graphics or not used</li> </ul>	<ul style="list-style-type: none"> <li>- Many slides are difficult to read.</li> <li>- Some spelling and grammatical errors</li> <li>- Inappropriate animations and graphics or not used</li> </ul>	<ul style="list-style-type: none"> <li>- Many slides are difficult to read.</li> <li>- Numerous spelling and grammatical errors</li> <li>- Inappropriate animations and graphics or not used</li> </ul>
Speaking skills, eye contact and posture	10%	3, 4	<ul style="list-style-type: none"> <li>- Speak clearly (volume+speed) all the time</li> <li>- Mispronounce no words</li> <li>- Not reading scripts</li> <li>- Have eye contact most of the time</li> <li>- Appropriate posture (stand up straight, relax, and confident)</li> </ul>	<ul style="list-style-type: none"> <li>- Speak clearly (volume+speed) all the time</li> <li>- Mispronounce a few words</li> <li>- Reading scripts sometimes</li> <li>- Have eye contact most of the time</li> <li>- Appropriate postures</li> </ul>	<ul style="list-style-type: none"> <li>- Speak unclearly (volume+speed) sometimes</li> <li>- Mispronounce a few words</li> <li>- Reading scripts sometimes</li> <li>- Have eye contact sometimes</li> <li>- Appropriate postures</li> </ul>	<ul style="list-style-type: none"> <li>- Speak unclearly (volume+speed) all the time</li> <li>- Mispronounce a few words</li> <li>- Reading scripts sometimes</li> <li>- Have eye contact sometimes</li> <li>- Inappropriate postures</li> </ul>	<ul style="list-style-type: none"> <li>- Speak unclearly (volume+speed) all the time</li> <li>- A lot of mispronounced words</li> <li>- Reading scripts all the time</li> <li>- No eye contacts</li> <li>- Inappropriate postures</li> </ul>
Response to question	20%	2, 4	<ul style="list-style-type: none"> <li>- Have correct and clear answers to all questions</li> <li>- Have eye contact and appropriate body language</li> </ul>	<ul style="list-style-type: none"> <li>- Have correct and clear answers to most of the questions</li> <li>- Have eye contact and appropriate body language</li> </ul>	<ul style="list-style-type: none"> <li>- Have unclear answers to most of the questions</li> <li>- Have eye contact and appropriate body language</li> </ul>	<ul style="list-style-type: none"> <li>- Incorrect and unclear answers to some questions</li> <li>- Need to improve eye contact and body language</li> </ul>	<ul style="list-style-type: none"> <li>- Incorrect and unclear answers to all questions</li> <li>- Need to improve eye contact and body language</li> </ul>
Report submission	10%	4	3 days before presentation	2 days before presentation (Before 4.30 pm)	2 days before presentation (After 4.30 pm)	1 day before presentation (Before 4.30 pm)	1 day before presentation (After 4.30 pm)
Length of presentation	10%	4	Within 15 mins	Within 17 mins	Within 19 mins	Within 21 mins	More than 21 mins

## Need to know for SEMINAR

### Teaching procedures

1. Each student will be assigned by an advisor and guided in the preparation of the seminar presentation.
2. Students must search for their own recent scientific papers in microbiology or biomedical sciences. Select at least 2 papers that should be published within the last 5 years. Set the title of the seminar topic. The integration of the papers leading to the professional seminar (unlike the journal club presentation) is encouraged.
3. Students must propose the seminar topic to their advisor (s) for approval.
4. Students should meet the advisor to formulate an overall plan for seminar presentation.
5. Students should prepare a Power Point presentation and practice the presentation.
6. Students must compose an abstract which contains the title, the author's name, the advisor's name, an abstract with 250 to 300 words limit with list of references and then submit to their advisors to approve.
7. The title, abstract, power point and the main paper for seminar must be submitted to the e-learning for at least 7 days before your seminar date, otherwise, the points of submission will be subtracted subsequently day by day.
8. Students have 30 minutes to present the presentation and 20-30 minutes to answer questions and discuss the paper with the audience.
9. After presentation, the students are discussed in their own group for 5-7 minutes depending on the modulators and the complexity of the topic (please see the student in the last page)
10. All graduate students are expected to attend and actively participate in the class with discussion.



### Step of seminar presentation in class

1. The seminar presentation must correspond to the specific content on [page 10](#) (please see page 10 of this document).
2. After the seminar presentation (30 min), the students must ask questions or discuss the related aspects.
3. The question session:
  - The priority for asking the questions of the students is as follows.
    - 1) Enrolled students
    - 2) Non-enrolled students
    - 3) Lottery for activating the participation (both enrolled and non-enrolled students)
  - Only volunteer questions (enrolled student) will be counted in [the score of participation \(10%\)](#) and volunteer question from non-enrolled student will be recorded for “[Good participant award](#)” (There are awards in the progress report conference for students who have the most participations).
  - After the presentation, the comment for the presenter will be sent privately to the e-mail or other contact means.
  - For non-enrolled students, student who missing the class > 2 times (Co-modulator will record in the class.) must have special seminar presentation in the next semester.

MD627 994 Seminar in Medical Microbiology  
Department of Microbiology, Faculty of Medicine, Khon Kaen University

Title .....

Student .....

Advisor .....

Date .....

***Abstract***

The abstract should contain background, objective, materials and methods, results, and conclusions.

***References***

1.....

2.....

*Notification: the whole abstract must not exceed one A4 page*

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**Power point presentation**

Power point presentation should be included

1. Introduction and rationale
2. Objectives
3. Experiments (flowchart and pictures are very preferable)
4. Results
5. Conclusion
6. Summary
7. Criticism

## Need to know for PEER REVIEW (PROGRESS REPORT)

1. The text (around 3-5 pages) describing the thesis progress **must have to be submitted 3 days before presentation**. Please specify the year of study (e.g., 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> year student)
2. The presentation is a **15-minutes-talk** by emphasizing the current experiments that have never been presented before.
3. The content of presentation should contain 7 topics as following (please see page 12 of this document):
  1. Introduction and rationale (1-2 slides, very concise, skip if it presented in the previous time),
  2. Conceptual framework
  3. Objective (s)
  4. Study design and anticipated outcomes
  5. Result (analyzed information or data) and table comparing the result from previous presentation and conclusion (s)
  6. Problem (s) in the experiment/thesis and sharing of how to fix the problem (s)
  7. Plan of the thesis (number of enrolled credit/timetable & plan/What to do next?) (compulsory)
4. For the 1<sup>st</sup> year students, the presentation can include (as it is the beginning of the experiment):
  - Literature review and rationale
  - Conceptual framework
  - Objective (s)
  - Study design and anticipated outcomes
  - Plan of the thesis (number of enrolled credit/timetable & plan/What to do next?) (compulsory)



If the students have any queries, please feel free to contact Dr. Chukkris, Dr. Auttawit, or Dr. Sakawrat.

## Thesis progression

Thesis title: .....

Thesis progression title: .....

Student: ..... Student ID: .....

Advisor: .....

Co-advisor: .....

Date: .....

1. Introduction

2. Objective (s)

3. Materials and methods

    Example 3.1 Bacterial strains or Cell line

        3.2 RNA extraction

        etc..

4. Results

5. Conclusion

6. References

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### Power point presentation (please see the template in e-learning)

1. Introduction and rationale (1-2 slides, very concise, skip if it presented in the previous time),
2. Conceptual framework
3. Objective (s)
4. Study design and anticipated outcomes
5. Result (analyzed information or data) and table comparing the result from previous presentation and conclusion (s)
6. Problem (s) in the experiment/thesis and sharing of how to fix the problem (s)
7. Plan of the thesis (number of enrolled credit/timetable & plan/What to do next?)\* \*\*

## List of presenters (2<sup>nd</sup> Semester, AY 2025)

Venue: Lecture Room #4, Faculty of Medicine, Khon Kaen University

Date-year	Seminar's presenters	Progress report's presenters
26/11/2025	Special seminar: Dr. Karnchanok Kaimuangpak Orientation (Dr.Chukkris)	
3/12/2025	Special seminar: Dr. Orasa Panawan	
10/12/2025	Constitution Day	
17/12/2025	Prawphan	Prawphan, Sutharini
24/12/2025	Patipan	Patipan, Nattaya
31/12/2025	New Year's Eve	
7/1/2026	Zwe	Zwe, Narathit
14/1/2026	Nithipoom	Nithipoom, Roeub Sievlong
21/1/2026	Juthamas	Juthamas, Areeya
28/1/2026	Audi	Audi, Hung Cuong Truong
4/2/2026	SDL	
11/2/2026	Jittraporn	Jittraporn, Siwakorn
18/2/2026	Weawwadee	Weawwadee, Supanut
25/2/2026	Wanaporn	Wanaporn, Thitima
4/3/2026	SDL	
11/3/2026	Panjamaporn	Panjamaporn, Kansuda
18/3/2026	Kanyanat	Kanyanat, Pasinee
25/3/2026	Patharakan	Patharakan, Chanakan, Ploy
	14 <sup>th</sup> MMC (to be announced later)	

## Schedule of seminar presentation and progress report (Second Semester, AY 2025)

Date: every Tuesday at 10.00 AM - 12.00 PM | Venue: Lecture Room #4 (Near the Pharmaceutical canteen), Faculty of Medicine, Khon Kaen University

Date-year	Seminar's presenters	Progress report's presenters	อาจารย์ Moderator ท่านที่ 1	อาจารย์ Moderator ท่านที่ 2	อาจารย์ผู้เข้าฟังสัมมนา/รายงานความก้าวหน้า			
					ท่านที่ 1	ท่านที่ 2	ท่านที่ 3	ท่านที่ 4
26/11/2025	Special seminar: Dr. Karnchanok Kaimuangpak Orientation (Dr. Chukkris)		Chukkris	Suwalak	Arnone	Auttawit	Sakawrat	Umaporn
3/12/2025	Special seminar: Dr. Orasa Panawan		Sirinart	Arnone	Chukkris	Suwalak	Pratsanee	Sonwit
17/12/2025	Prawphan	Prawphan, Sutharini,	Umaporn	Sakawrat	Auttawit	Sirinart	Wises	Pratsanee
24/12/2025	Patipan	Patipan, Nattaya	Wisitsak	Arnone	Kittipan	Pratsanee	Supranee	Chukkris
7/1/2026	Zwe	Zwe, Narathit	Supranee	Sonwit	Chukkris	Wises	Sirinart	Auttawit
14/1/2026	Nithipoom	Nithipoom, Roeub Sievlong	Sakawrat	Pratsanee	Kittipan	Suwalak	Parama	Arnone
21/1/2026	Juthamas	Juthamas, Areeya	Sirinart	Suwalak	Kittipan	Supranee	Wisitsak	Wises
28/1/2026	Audi	Audi, Hung Cuong Truong	Arnone	Wisitsak	kittipan	Umaporn	Sakawrat	Supranee
11/2/2026	Jittraporn	Jittraporn, Siwakorn	Supranee	Sakawrat	Wisitsak	Sirinart	Chukkris	Wises
18/2/2026	Weawwadee	Weawwadee, Supanut	Auttawit	Sonwit	Wises	Umaporn	Arnone	Parama
25/2/2026	Wanaporn	Wanaporn, Thitima	Suwalak	Pratsanee	Sonwit	Kittipan	Parama	Wisitsak
11/3/2026	Panjamaporn	Panjamaporn, Kansuda	Chukkris	Umaporn	Auttawit	Wises	Wisitsak	Kittipan
18/3/2026	Kanyanat	Kanyanat, Pasinee	Pratsanee	Auttawit	Kittipan	Suwalak	Wises	Sonwit
25/3/2026	Patharakan	Patharakan, Chanakan, Ploy	Sonwit	Supranee	Umaporn	Parama	Kittipan	Sakawrat
	14 <sup>th</sup> MMC (to be announced later)							

