EMNERAPPORT – INSTITUTT FOR BIOMEDISIN

ANNUAL EVALUATION REPORT – DEPARTMENT OF BIOMEDICINE

Emnekode: *COURSE CODE:*	**BMED320**	Semester / år: SEMESTER / YEAR:	**Høst / Autumn 2024**
Emnenavn: *COURSE NAME:*	*Methods in Biomedical Research*		
Emneansvarlig: *COURSE COORDINATOR:*	**Inari Kursula**	Godkjent: *APPROVED:* (admin.)	Utdanningsleder IBM 23.05.2025
Rapporteringsdato: *DATE OF REPORT:*	**21.5.2015**		

INNLEDNING / *INTRODUCTION*:

Kort beskrivelse av emnet, inkl. studieprogramtilhørighet. Kommentarer om evt. oppfølging av tidligere evalueringer.

SHORT COURSE DESCRIPTION, INCLUDING WHICH STUDENTS/CANDIDATES MAY ATTEND. COMMENTS TO CHANGES BASED ON PRIOR EVALUATIONS.

Methods in Biomedical Research (25 ECTS) is an obligatory course for students attending the Master's Programme in Biomedical Sciences (MAMD-MEDBI). The course is aimed at giving the students a theoretical overview of methods and technology commonly used in basic biomedical research, including practical experience in selected methods.

The course begins with 4 weeks of lectures and continues with full-time experimental laboratory work under supervision for 8 weeks. The teaching language is English. The students are evaluated based on a home exam (55%) and an assignment to write a scientific manuscript based on the lab work (45%).

For course description, visit http://www.uib.no/en/course/BMED320

For previous reports, visit https://kvalitetsbasen.app.uib.no/popup.php?kode=BMED320

The evaluation report for 2023 listed following changes planned for 2024:

> The plan is to include a 2-week programming (Python) module in BMED320, while cutting down the lab period to 7 weeks. This module will have an assignment, but it will not be part of grading. Details on this, as well as the long-term continuity of the arrangement, must be planned before the next edition of the course.
>
> The issue about communication and lecture content can be evaluated, and perhaps some lecture topics could be updated.
>
> It must be evaluated if the home exam is the same format as this year, or if the course will go back to the written essay. It could be discussed, whether students gather points from both the exam and the written article to get one final grade based on the full points at the end of semester, or if they are both graded separately, and the final grade is determined as before (55/45 exam/manuscript). The timing of the home exam can also be discussed (it was quite early in the semester).
>
> Any changes to the course must go through the course responsible (Inari Kursula), when she returns from her sabbatical leave in March 2024.

<u>Comments to these planned changes or other changes made for the 2024 autumn semester:</u>

- The proposed 2-week Python programming module was implemented in 2024 as planned. Students were given a non-graded assignment to familiarize themselves with basic programming concepts relevant to biomedical data analysis. The module was generally well received. Several students

thought the first week was a bit slow, but that was also understandable, as this was the first time this module was run.

- The laboratory period was reduced to 7 weeks.
- The exam was held as a MCQ/short question in-class exam. This will also be the future format. Based on student feedback, they would prefer more broader type of questions instead of questions requiring mostly memorizing details.
- The lecture on RNA silencing methods was left out because the person who had that lecture has moved. It was deemed that the topic was covered well enough in the animal model lectures. Instead, a lecture on metabolism was included.

STATISTIKK / *STATISTICS* (admin.)**:**

Antall vurderingsmeldte studenter: *NUMBER OF CANDIDATES REGISTERED FOR EXAMINATION:*	**21**	Antall studenter møtt til eksamen: *NUMBER OF CANDIDATES ATTENDED EXAMINATION:*	**20**

Karakter-skala *GRADING SCALE*	*«A-F»*	**A:**	**B:**	**C:**	**D:**	**E:**	**F:**
		1	8	8	3	0	0

KOMMENTARER TIL KARAKTERFORDELINGEN / *COMMENTS TO THE STATISTICS*:

Emnerapporten utarbeides når sensuren etter ordinær eksamen i emnet er klar. For muntlige eksamener er da resultatfordelingen endelig, men for skriftlige eksamener kan endelig resultatfordeling avvike noe om evt. klagebehandling ikke er fullført.

THIS REPORT IS PREPARED AFTER ORDINARY EXAMINATION. FOR ORAL EXAMS, THE RESULTS ARE FINAL, FOR WRITTEN EXAMS, THE FINAL GRADING DISTRIBUTION MAY DIFFER SLIGHTLY IF CANDIDATE COMPLAINTS/APPEALS HAVE NOT BEEN PROCESSED.

One of the 21 students registered for the course withdraw from the Study Program early in the semester without withdrawal from registration, attendance and examination. This means that the total number of students registered for examination should be 20, not 21.

All of the 20 students passed their written examination held 6 December (mean grade C) as well as their semester thesis (mean grade B). Submission deadline for the semester thesis was almost 2 weeks after the written exam, 19 December.

SAMMENDRAG AV STUDENTENE SINE TILBAKEMELDINGER / *SUMMARY OF EVALUATIONS GIVEN BY THE STUDENTS*

Spørreundersøkelse via Mitt UiB, annen evaluering, tilbakemelding fra tillitsvalgte og/eller andre.

COURSE EVALUATION ON MITT UIB, OTHER EVALUATIONS, RESPONSES FROM THE STUDENT REPRESENTATIVES AND/OR OTHERS.

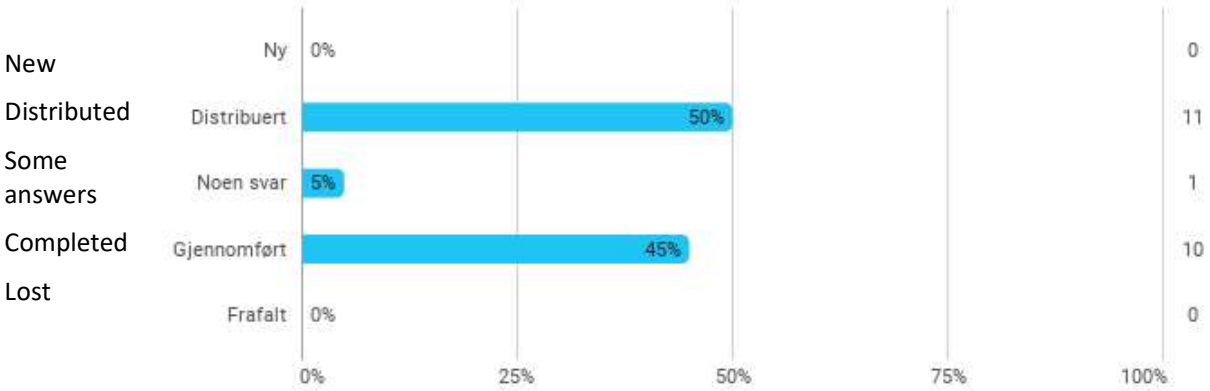
SurveyXact was used as the digital evaluation system. Some of the questions were Multiple Choice Questions (MCQ), while others allowed the students to give their own opinion in writing.

The survey was set up as anonymous and distributed to the students using their E-mail addresses at UiB. The Survey was distributed the 4 December to 22 students registered for the course. Reminders were sent the 11 and 16 December to those (20 and 14) students that hadn't responded before.

The attendees were asked about the academic content, the organization, and the educational level of the teaching, and asked to evaluate the total workload of the course. They were asked to give their responses about the lectures, what they appreciate – or found disappointing – about the course. Finally came some questions regarding the exam and their learning outcomes.

When the survey closed 19 December 2024, responses from 11 (50 %) students were registered.

Overall status:



SUMMARY OF THE RESULTS:

1. Academic content and workload

- Perceived workload: Generally appropriate, though varied significantly for the 7-week projects, depending on the assigned lab.
- Course content: Mostly appreciated, with a call for less memorization and more application-based learning in the exam.

2. Organization and structure

- General feedback: The course was seen as well-organized, but several students noted late or unclear communication about key components (*e.g.* lab placements, exam).
- Exam timing: Many students preferred the exam to be scheduled before the 7-week lab period to avoid stress and allow better preparation.

3. Lectures

- Quality: Generally well-received.
- Suggestions: Include more information in lecture slides, record lectures, and align lecture content more closely with the exam.

4. Laboratory courses

- Experience: Highly appreciated overall, but quality varied significantly between labs.
- Structure: Calls for potential rotation across multiple labs to gain broader experience.

5. Python module

- Seen as valuable and interesting, with suggestions to extend it throughout the semester or integrate it with lab work.

6. Exam and thesis assessment

- Exam: Criticized for being too difficult, misaligned with the provided materials, and harder than previous years. Several noted the exam format (multiple choice) and noisy environment as problematic.
- Semester thesis: Generally valued, though seen as narrow in scope compared to the lecture topics. Group writing was appreciated as a skill-building exercise.

7. Other modules (library, HSE)

- Mixed feelings; some found them useful, others thought they were unnecessary or unclear.

The student feedback is generally positive but also reveals some areas for improvement. The exam structure, timing, and fairness were major concerns and should be addressed in the future. Students are also asking for more practical integration, such as linking the Python module more closely to lab work and reducing reliance on rote memorization in assessments. This may be hard to implement due to the wide variation in the lab projects, but it is something to consider for the coming years.

EMNEANSVARLIG SIN EVALUERING OG VURDERING / *EVALUATION AND COMMENTS BY COURSE COORDINATOR:*

Faglæreres vurderinger av emnet. *TEACHER COMMENTS.*

Eksempel: Kommentarer om praktisk gjennomføring, undervisnings- og vurderingsformer, evt. endringer underveis, studieinformasjon på nett og Mitt UiB, litteraturtilgang, samt lokaler og utstyr.

EXAMPLE: COMMENTS ABOUT PRACTICAL IMPLEMENTATION, TEACHING AND ASSESSMENT METHODS, IF NECESSARY. FUTURE CHANGES/CHANGES IN PROGRESS, STUDY INFORMATION ON THE INTERNET AND MITT UIB, LITERATURE ACCESS, LOCALES AND EQUIPMENT.

- The course ran as planned in Autumn 2024 with a successful the new Python programming module included. While not part of the grading, the module enriched the students' skillset. The shortened lab period still allowed for meaningful experimental work, and the students were able to complete their manuscripts to a high standard.
- The planned introductory lab course was reduced from two days to just one due to scheduling difficulties. Two assistants (PhD student and post doc) were responsible for planning and running the lab exercise.
- In addition to the feedback form, I meet almost every student after the course for giving personal feedback on their written assignment and for asking for their feedback and ideas on developing the course.

MÅL FOR NESTE UNDERVISNINGSPERIODE – FORBEDRINGSTILTAK / *PLANNED CHANGES FOR THE NEXT TEACHING PERIOD – HOW TO BE BETTER:*

- The Python course will be kept but can be slightly condensed.
- The written exam will be moved slightly earlier in the semester, so that it will be before the lab projects start.
- The introductory lab course will be two days.
- I will talk to the other lecturers about the exam questions and encourage questions measuring broader understanding of the topics

FS – resultatfordeling (graf) / FS – DISTRIBUTION OF GRADING (GRAPH):

UiB-Studieavdelingen (BIH) FSUIB (14.01.2025 Kl. 11:27) Side 1 av 1

FS580.001 Distribution of results

Exam: BMED320 0 HO 2024 HØST

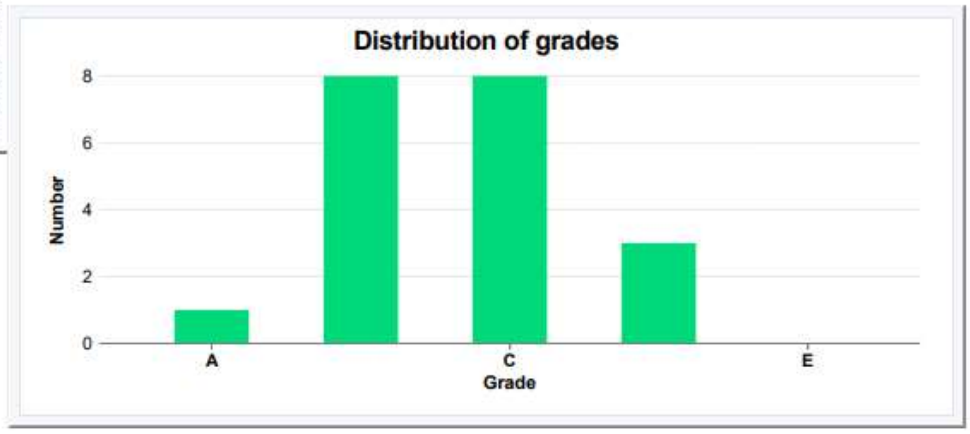
Methods in Biomedical Research - Semester thesis and examination 25,0sp

Grading scale: Letter grades - Passed

-

	Total	
Number of candidates (registered):	21	
Number appearing at the examination:	20	
Number of passes:	20	
Number of failures:	0	0%
Number of withdrawals during examinatio	0	
Mean grade:	C	
Number presenting medical certificates:	0	
Number of withdrawals before examinatio	0	

Grade	Number
E	0
D	3
C	8
B	8
A	1



The assessment consists of two parts:

1. Exam after completing theory lessons.
2. Submission of term paper after placement in the lab.

They account for 55% and 45% percent, respectively, of the total exam result, while the practical data analysis assignments will be graded as pass/fail. All parts must be passed for course fulfillment.

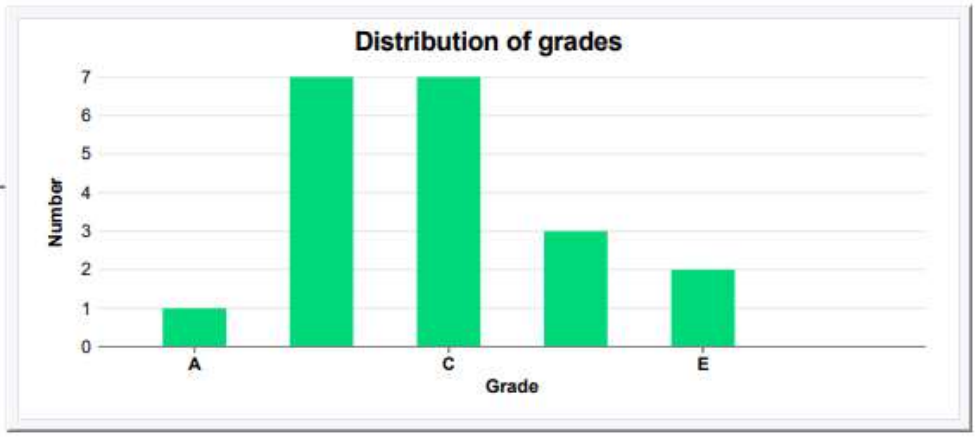
The results for each part was as follows:

Written exam after completing theory lessons (average grade = C):

Exam: BMED320 0 S 2024 HØST
Methods in Biomedical Research - Written examination 25,0sp
Grading scale: Letter grades - Passed

	Total	
Number of candidates (registered):	21	
Number appearing at the examination:	20	
Number of passes:	20	
Number of failures:	0	0%
Number of withdrawals during examinatio	0	
Mean grade:	C	
Number presenting medical certificates:	0	
Number of withdrawals before examinatio	0	

Grade	Number
E	2
D	3
C	7
B	7
A	1
Passed	0



Term paper (semester thesis) after the lab (average grade = B):

FS580.001 Distribution of results

Exam: BMED320 0 SEM 2024 HØST

Methods in Biomedical Research - Semester thesis 25,0sp

Grading scale: Letter grades - Passed

-

	Total	
Number of candidates (registered):	20	
Number appearing at the examination:	20	
Number of passes:	20	
Number of failures:	0	0%
Number of withdrawals during examinatio	0	
Mean grade:	B	
Number presenting medical certificates:	0	
Number of withdrawals before examinatio	0	

Grade	Number
E	0
D	0
C	4
B	10
A	6
Passed	0