Programme Committee for Master Program in Biomedical Sciences minutes

Time: 16th February 2024, 13:00-15:00
Place: Seminarrom 7A132aY, 7 floor, BBB

Attentats: Mathias Ziegler, Stian Knappskog, Camilla Krakstad (Teams), Léa Longueville, Petri Kursula, Karl Johan Tronstad, Casper Sandvik, Kristofer Rubin (Teams), Odd Helge Gilja (Teams), Frode Berven (Teams)

Secretary: Toma Christako

Agenda

1	**Comments on meeting invitation** *No comments*
2	**Minutes from the last meeting** See attachment 1 *No comments*
3	**Voting for approval of courses for IBM master students** Suggested courses from MatNat and IBM **for approval** that could be available for IBM master students. MOL310, MOL204, MOL217, BMED903, INF100. See attachment 2 --- *Committee has voted to approve courses.* *Comments:* • *MOL2017 can be difficult* • *INF100 only Norwegian* • *BMED903 partly Norwegian?* • *There was suggestion for collaboration in creating new course*

4	**BMED320 - Methods in Biomedical Research (25 ECTS) report** Comments from report: - to include a 2-week programming (Python) module in BMED320, while cutting down the lab period to 7 weeks - It must be evaluated if the home exam is the same format as this year, or if it goes 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 Comments from previous meeting: 2022 was funding for a 2 day pre-lab course. This was appreciated and necessary and should be implemented in BMED320 from autumn 2024. Possible with PhD's as teachers. What action should be taken? - Send formal request to K1/K2? Necessary with additional projects and locations for BMED320 lab work from autumn 2024 Could it be a requirement to be able to offer master projects? See attachment 8 --- *Suggestion evaluation pass/fail, could be retaken next year* *Could show if they have equivalent skills in Python* *What will student do if he/she already has required skills?* *Students say that calculations are the most difficult part in in BMED320* *Instead of 2-day pre-lab course it could be arranged quiz/MCQ, online exercise practice/tutorial to remind/introduce calculations* *Suggestions to send personal emails after easter holidays, include in internal newsletters information for K1/K2 and raise the possibility to receive credits for teaching*
5	**BMED380 - Seminar Series (5 ECTS) report** Registered 4 students (3 IBM, 1 premed) (09.02) How to attract more master students? Comments from report:

- There is not much publicity for the course at the Department of Biomedicine
- A short introduction of BMED380 as part of the mandatory BMED320 course should be considered?
- Goal to also attract a larger crowd in general could make for more interesting discussions after each seminar which ultimately also benefit the students
- Currently used ways of advertising (posters, emails, etc.) will be extended to also include adding the seminars to the Outlook calendar for the employees at the Department of Biomedicine

See attachment 3

- *It is not attractive to students because of additional work for credits*
- *Committee voted to have BMED380 with mandatory attendance in the first semester for the next year*
  - o *Maybe they could receive reduces credits just for attending?*
  - o *Teachers should keep that time free of activities*

6	**Change admission requirements**

As per today admission requirements are as follows:

- A completed Bachelor's degree with the following content among the courses included in the degree:

  1) 20 ECTS (European Credit Transfer and Accumulation System) of molecular Biology and/or cell Biology

  2) 20 ECTS of chemistry and/or biochemistry

  3) 40 ECTS of either more of 1) or 2) or supplementary courses within biology, biotechnology, anatomy, physiology, medical laboratory courses, mathematics, informatics, image sciences, nanotechnology or physics.

- A grade point average of C or higher in the relevant courses (1, 2 and 3)

Also, the applicant's courses should not be more than 5 years old at the time of application. For applicants for non-English-speaking countries outside the EU, a passed English test is additionally required.

Suggestion to add 10 ECTS of practical laboratory course?

- *It was agreed that it should be requirement for 10 ECTS of practical experience in laboratory*
- *How it will be proven?*

	• *Toma and Mathias will write suggestion for next meeting*
7	**Suggestion from Kristofer Ruben as a follow up of point 4 previous meeting** • To have a course on current medical problems\chronic diseases worldwide. • It could run throughout the year and be scheduled for 2 hrs. per week? • Could be an example of simplified course from IGS in global health or epidemiology? See attachment 9 • *Working on Point 5* • *Hear with Jutta Dierkes about global health course that was included in human nutrition master program*
8	**From the students** *Students feel stressed but are still in good moods.*
9	**Orientations** • BMED365 – registered 15 students (09.02). 11 IBM, 1 PhD, 1 premed, 2 med tecnology • NORBIS - Metabolic pathway analysis. Week 8-9 (EITRI, Group room BBB) 　○ *7 students, starts on Monday* • Updated text in master program webpage https://www.uib.no/en/studies/MAMD-MEDBI
10	**Miscellaneous** • Who can lead **master progress presentations 14-15 of March**? 　○ *14th March Camilla Krakstad will lead* 　○ *15th March Mathias Ziegler will lead* • An update on Master ceremony Booked Auditorium in Glasblokkene **07.06.2024** between 14:30 – 16:30 Confirmed funds from Institute for cake, coffee, and roses. Speech from Mathias Ziegler, Inari Kursula? And Nucleus representative • Update on PU members Programutvalg for biomedisin | Det medisinske fakultet | UiB

11	**From the Faculty/studieledelse**
	• Egenvurderinger fra programutvalgene for 2023, see attachment 4
	The faculty asks the program committees to prepare a short, written self-assessment of a maximum of 1-2 pages by **Friday 15 March 2024**. The self-assessment must be based on the self-assessments from those responsible for the subject, as well as any report from an external peer. It must also be assessed whether planned or implemented changes at subject level affect the program as a whole. If results from the study barometer and/or other surveys show a need for follow-up, this must be reflected in the self-assessment.
	In addition to this, they ask that the program committees also mention these two points in their self-assessments: • Participation in non-compulsory teaching. Approximately what proportion of students participate in non-compulsory teaching? Do you see any changes over time? • Language skills of the students. Do the students have sufficient language skills in relation to the requirements of the study? Does the program experience any special challenges with this?
	The self-assessments, together with discussions from the dialogue meetings, will form the basis for the faculty's overall study quality report. o *Toma will prepare a paper what exactly is needed for report*
	Høyring - nasjonal samordning av masteropptak. See attachement 5
	• The main features are:
	Applicants must submit a prioritized list of application options, within defined deadlines, and get offer of study place only at one educational institution.
	As a starting point, the applicant must be assessed for general admission requirements once/at one place. The educational institutions must still process the academic admission requirements. For applicants with Norwegian documentation, there is great potential for automatic assessment of all or parts of the admission basis.
	A national assessment unit is established for applications with foreign education. The unit is proposed to assess the level, scope, authenticity of documents, as well as language requirements.
	A coordinated master's admission must be regulated by a common set of regulations, and the legislative authority must determine a regulation for admission to master's studies. A coordinated master's admission will require a

	process review at the educational institutions, and that the educational institutions contributes to arriving at organisation, regulations and routines that facilitate good division of labour, equal treatment and predictability for applicants.
12	**Studiebarometeret** For results see attachement 6-8 (not public yet) *Student comments:* • *Lack of connection with outside world* • *What to do after you finish your master degree, in Bergen?*
13	**Next meeting** Suggest dates for spring semester? Example [Programutvalg for ernæring | Det medisinske fakultet | UiB](#) *Next meeting 26th april 13:00*

Attachment 1.

Attachment 1.

PU-meeting Master Biomedicine 03.11.2023

Present

Members: Mathias Ziegler, Petri Kursula, Stian Knappskog, Camilla Krakstad, Casper Eugen Sagstad, Karl Johan Tronstad, Jennifer Jena… Frode Berven,

Not attending: Arne Tjølsen, Kristofer Rubin Lea Longueville

PU-coordinator: Bianca C. Nygård, and Toma J. Christako

Agenda

	Comments on the agenda or minutes from last meeting No comments
1	**BMED320, revision** • Include programming (PYTHON) in curriculum Suggestion: 2 weeks work, reduce lab. project to 7 weeks **Attachment 1 course description** Introduction from Mathias Programming will be a valuable addition as a method in biomedical research. To implement the course we suggest a reduction in the lab-period to 7 weeks. Petri is currently responsible for BMED320: OK with two weeks. Course description needs some revision. -Work load of 40 hours of lectures in one week is not realistic. -Assessment described as pass/fail. Necessary with specifications of requirements, and a fall back for students who fail.you fail the project work? Need to specify the pass requirements. Completed course is a pass. If students fail, they will be allowed to complete BMED320, but need to resubmit later…. Vote: Unanimous to proceed and incorporate Python course. BMED320 continued: 2022 there was funding for a 2 days pre-lab course. This was appreciated and necessary and should be implemented in BMED320 from autumn 2024. Possible with Phd's as teachers. Toma will follow up in early spring semester. • Send formal request to K1/K2?

	Necessary with additional projects and locations for BMED320 lab work from autumn 2024 Could it be a requirement to be able to offer master projects? Has been discussed in earlier meetings: To make it a requirement to contribute in BMED320 will likely be unfortunate. One might risk that people will not accept master students from biomedicine because of increased workload. Other options should be investigated. Email to people currently being supervisors and ask them to participate? Confirmation of supervision in lab to phds involved in projects? Necessary to revisit in future meetings
2	**New Program web-pages** Attached are suggestions to new program pages for publication online. The layout and content of all UIB's program pages are revised to appear more uniform. **Attachment 2** is the English version of the new draft for Master of biomedical sciences. The program committee is asked to review and comment the contents Unfortunate to link the outcome to projects on diseases only. Also include molecular as well as cellular throughout the descriptions. Follow-up: Bianca: Write a new draft and circulate for input asap.
3	**From the students** Lab project in BMED320: Wish to learn more in this period. To learn more techniques. First year students aren't very social yet. Suggest close contact with dept. in the spring, to engage the students more.
4	**New elective subject from K1/K2?** **Last meeting we discussed a wish to create elective subjects with clinical content. possibilities, and topics. Further discussion.** To be discussed in future meetings: One clinical course: "current topics of medical research"? The "Medicine" in biomedicine may be underrepresented? **Attachment 3** current elective subjects available

5	**Orientations**
	• **New subject BMED365:** Computational imaging, modelling and AI in biomedicine **available from January 2024** • **New "studieforskrift" from January 2024. Information from Bianca**
5	**Miscellaneous** NORBIS: two week course in computational analysis. Master students will get 10 stp to complete this course. Wish to "pre-approve" Yes from the committee. Introduce the course at master lunch. Eitri: Possible meeting location.
7	**Next meeting:** • Date Friday, 13.00 26. January
	Next meeting: opptakskrav **Elektivt emne**

Attachment 2.

The courses that could be offered to IBM Master students

26.01.2024, IBM

UNIVERSITY OF BERGEN
The Department of Biomedicine

Contents

1.Structural Molecular Biology (MOL310)

Postgraduate course

ECTS credits	Teaching semesters	Number of semesters	Language	Level of Study
10	spring	1	English	Master

1.1.Course description

Objectives and Content

Objectives:

The course aims to give students knowledge regarding the relationship between biomacromolecules structure and their function, as well as skills applicable towards solving relevant problems. Students will learn about methodologies to determine structures, how to analyze them, and understand their biological and biomolecular properties. There will be an emphasize on how several biomacromolecules assemble into functional assemblies and how these give rise to properties important for cells or the organisms. Developing a student¿s ability to solve problems within structural biology at an advanced level is an important goal for the course.

Content:

The primary biomolecular focus of the course will be proteins. Other biomolecules and assemblies of biomolecule will generally only be discussed in connection with their relationship to proteins. Topics that will be covered include how amino acids are assembled into primary, secondary, tertiary and higher order structures and complexes, and how functional protein properties then emerge. The course will offer introductions into relevant methodology, how protein structures are determined and explored both experimentally and by computational techniques. It will assume prior knowledge in fundamental protein chemistry, some cell biology and biochemistry, as well as the application of multiple sequence alignments. The course will build on concepts that has already been introduced earlier, including protein folding, allostery, catalysis and enzymology, ligand and effector binding, post-translational modifications, and signaling. An important aspect of the course will be how all these phenomena regulates, and is regulated by, protein function. The course will also discuss the structural and biochemical basis of molecular signaling, as well as enzyme function from a structural, kinetic and thermodynamical point of view. Protein evolution from as sequence and structural perspective will be covered, as will diverse molecular topics within protein-ligand interaction, protein folding, and macromolecular assembly. Methodologies, especially those related to determining and analyzing structure, folding and binding behavior, will be introduced and discussed with the aim of improving student ability to plan how to approach and solve practical and theoretical problems in structural and molecular biology.

Learning Outcomes

On completion of the course the student should have the following learning outcomes defined in terms of knowledge, skills and general competence:

Knowledge

The student can provide detailed explanations about

- forces and effects that leads to the formation of protein structure, and the different levels of protein structure, from the amino-acid level to larger, quaternary complexes
- how a protein uses its structural organization to achieve traits that do not occur in its individual components
- protein classification by structure and function
- how these properties underpin function at the molecular level in a living organism
- how enzymes attain their unique properties
- how these protein functions are controlled by modification, localization and effector interactions
- Mass Spectrometry Cryo-EM, NMR, X-ray diffraction and computational techniques for determining structure at different levels of organization.
- In addition to the above, CD, fluorescence, and other relevant methodology to study protein fold, stability, binding behavior, and function
- how evolution act on protein primary sequence, structure and function

Skills

The student is able to

- analyze structure-function relationships when presented with biological and structural information
- explain (orally and in writing) how the topics outlined above acts together in cell processes such as signal transduction, endo / exocytosis, cell motility and gene regulation
- choose the right methodology in order to answer simple (and possibly also difficult) questions linked to a given macromolecular problem
- use information derived from methodologies relevant for the course to solve protein structure-function problems
- orient themselves in the spatial- and temporal scale that is associated with macromolecular understanding (that is, Ångstrøm to nanometers, ps-ms)
- solve theoretical tasks related to the topics discussed in the course
- use PyMol, a program for working with protein structures, at a novice level
- work in a group to produce a (compulsory) written assignment about a MOL310 relevant topic that the group chooses from a set menu. The group must also provide constructive assessment and feedback to the assignments of other groups. The assignments must maintain a good level with respect to student insight, clarity of presentation and proper use of terminology.

General competence

The student has

- the ability to place concepts discussed in MOL310 into a wider biological and chemical context, and moreover, reach their own conclusions independently of existing material
- solve problems within structural biology at an advanced level
- understood how particular protein achieves its specific and unique characteristics

- the ability to convey qualitative and quantitative aspects of structural molecular biology, by oral and written means, to both specialists and non-specialists
- the ability to navigate, understand and make use of protein classification, content in The Protein Databank, and UniProt and protein classification for the purpose of scientific communication (i.e., the written assignment)
- use scientific sources and tools to pursue and solve problems related to structural biology

Semester of Instruction

Spring.

This course **has a limited capacity, enrolment is based on application**. The application deadline is Wednesday in **week 2** for the spring semester. You will receive confirmation of whether you received a seat in Studentweb no later than Monday the week after the deadline.

It is **compulsory to attend the first lecture/orientation meeting**, or you risk losing your seat. If you are unable to attend the first lecture, you must contact the Study Section (studie.bio@uib.no).

1.2. Required Previous Knowledge

Bachelor's degree in **molecular biology, biology, or chemistry**. Educations of similar weight and a **biomolecular** focus can be considered. Regardless of exact background, good **knowledge of amino acid biochemistry, protein chemistry, cell biology, multiple sequence alignments**, as well as familiarity with **general and organic chemistry** is a prerequisite.

Access to the Course

In order to be admitted to the course, you must be admitted to a **master's programme** or the **doctoral education (PhD) programme** <u>at the Faculty of Mathematics and Natural Sciences</u> and fulfill required previous knowledge.

Teaching and learning methods

Lectures, colloquiums, workshops, in-lecture problem solving, groupwork, organized peer-bases feedback.

Compulsory Assignments and Attendance

Mandatory attendance to orientation meeting about written assignments.

Completed group assignment, a written essay. Participation in student-peer review of other groups¿ written assignments.

Obligatory activities are valid for total six semesters (current semester and the five following semesters).

The first lecture/orientation meeting is compulsory.

Forms of Assessment

Written school exam 4h (100%). *Date 10.06.2024, 15:00*

The written school exam must be completed and compulsory activity approved, to obtain a grade in the teaching semester.

For a semester without teaching, the student may take the school exam if compulsory activity is approved.

Grading Scale

The grading scale used is A to F.

Assessment Semester

An ordinary exam will be available each semester.

Examination Support Material

Non- programmable calculator, according to model listed in faculty regulations.

Programme Committee Course Coordinator

The Programme Committee is responsible for the content, structure and quality of the study programme and courses.

Course Administrator

The faculty of Mathematics and Natural Sciences - **Department of Biological Sciences** has responsibility for the course and programme.

1.3. Spring 2024 schedule

Start week 3, end week 20. Written school exam 4h (100%). ***Date 10.06.2024, 15:00***

Mainly Mondays, Wednesdays 15:15 – 14:00 at Høyteknologisenteret

1.4. Short summary of quality rapport

Last rapport is from year **2022** can be found: rapport.php (uib.no)
In general course evaluated as **good/very good** (67%).
Difficult examination
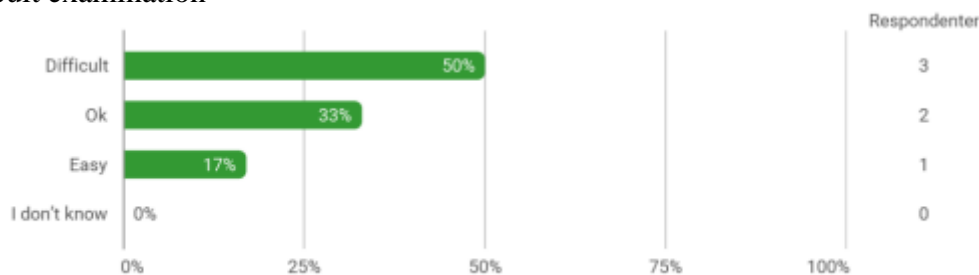
Most students are from master in molecular biology (67%), PhD.

		Respondenter
Master's programme in molecular biology	67%	4
Exchange student	0%	0
PhD	17%	1
Other	17%	1
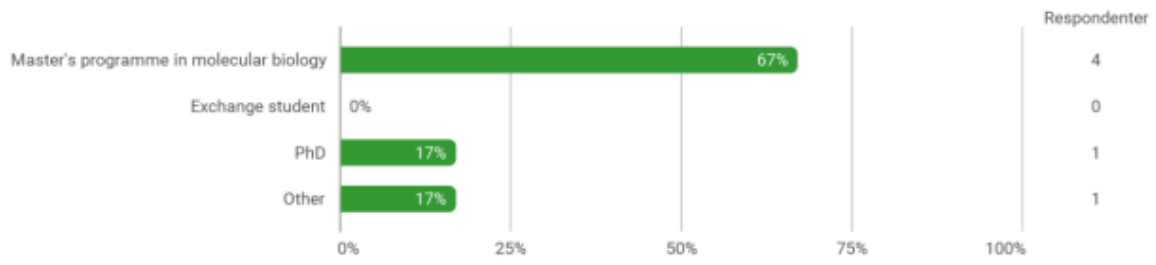
2.Applied Bioinformatics (MOL204)

Undergraduate course

ECTS credits	Teaching semesters	Number of semesters	Language	Level of Study
10	Spring	1	English	Bachelor

2.1.Course description

Objectives and Content

The course provides an introduction to the use of bioinformatics tools, including retrieval of information from databases, pairwise and multiple sequence alignments, phylogenetic trees, analysis of protein structures, recognition of sequence patterns, as well as an introduction to the use of Python and Unix for bioinformatics analyses. The theoretical basis for selected methods, such as dynamic programming, is studied in detail. The course consists of lectures, exercises and group work.

Learning Outcomes

On completion of the course the student should have the following learning outcomes defined in terms of knowledge, skills and general competence:

Knowledge

- The student has knowledge about which type of data is available from the most common protein sequence and structure databases (UniProt, GenBank, Protein Data Bank).
- The student knows the theories underlying the most common methods for sequence searches and sequence alignments, and in particular knows the principle and main steps for pairwise and multiple sequence alignments;
- The student can explain and is able to apply the main steps of dynamic programing for/to simple alignments of short sequences;
- The student can explain the principles behind reconstruction and interpretation of phylogenetic trees;
- The student understands connections between sequence similarity, 3D structure and function (for proteins), and evolutionary distance.
- Understands the principles of how 'Hidden Markow Models' and 'Position Specific Scoring Matrices' can be used of sequence pattern recognition.
- The student knows about computational methods that can be used for the prediction of protein 3D structure from sequence information.
- The student has a basic understanding for how to use Unix and Python to analyse biological data.

Skills

The student is able to:

- select and apply the most appropriate bioinformatics sequence or structure database to retrieve or search data given a specific question in molecular biology;

- select and apply the most appropriate method for aligning sequences, reconstructing evolutionary relationships, visualizing and analyzing protein structures.
- use python and unix to do simple bioinformatic analyses

General competence

- The student is able to reflect using its knowledge and skills in bioinformatics so as to decide whether a given molecular biology problem could benefit from a bioinformatics approach, and which methods to use.
- Using their theoretical knowledge about the most commonly used bioinformatics methods, the student is able, if encountering a new online tool, to get a general understanding of its underlying principle

Semester of Instruction

Spring.

This course has a **limited capacity, enrolment is based on application**. The application deadline is **Wednesday in week 3** for the spring semester. You will receive confirmation of whether you received a seat in Studentweb no later than Monday the week after the deadline.

It is compulsory to attend the first lecture/orientation meeting, or you risk losing your seat. If you are unable to attend the first lecture, you must contact the Study Section (studie.bio@uib.no).

2.2.Required Previous Knowledge
MOL100 and INF100

Recommended Previous Knowledge

None

Teaching and learning methods

The course is given as lectures and mandatory exercises

Lectures, 2 hours per week

Exercises, 4 hours per week

Compulsory Assignments and Attendance

The first lecture/orientation meeting is compulsory.

Towards the end of the semester a report centered about a set of bioinformatics problems must be submitted. The report must be approved before you can take the exam.

Completed activities are valid for 6 semesters (the current semester and the five following semesters). All mandatory activity must be approved before you can take the exam.

Forms of Assessment

Written exam, 4 hours. *Date 13.06.2024, 09:00*

Grading Scale

The grading scale used is A to F. Grade A is the highest passing grade in the grading scale, grade F is a fail.

Assessment Semester

An exam will be available each semester.

Examination Support Material

Non- programmable calculator, according to model listed in faculty regulations.

Programme Committee and Course Administrator

The Programme Bard is responsible for the content, structure and quality of the study programme and courses. The Mathematics and Natural Sciences - **Department of Biological Sciences** has the responsibility for the course and programme.

2.3.Spring 2024 schedule

Start week 3, end week 19. Written exam, 4 hours. ***Date 13.06.2024, 09:00.***

Mainly Tuesdays and some Fridays 08:15 – 10:00 at Høyteknologisenteret

2.4.Short summary of quality rapport

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3.Applied Bioinformatics II (MOL217)

Undergraduate course

ECTS credits	Teaching semesters	Number of semesters	Language	Level of Study
10	Spring	1	English	Bachelor

3.1.Course description

Objectives and Content

The course offers students a thorough training in the use of selected bioinformatic tools for the functional annotation of genes. The course includes projects where students work together. These exercises are based on bioinformatics research at the department. As part of working with the project, students are trained to critically evaluate methods and results. The theme of the projects may vary every year, but at the moment are based on RNA-seq. The course can be part of the Master's program in molecular biology as long as it does not overlap with the content of the master's thesis. **It is the supervisor of the master thesis and course coordinator responsible for MOL217 that will together decide if there is an overlap.**

Learning Outcomes

The course aims to provide a thorough knowledge about selected bioinformatical tools through case-studies based on experimental data and evaluation of tool performance.

Upon completion of course MOL217, students should be able to:

- explain and discuss the choice of bioinformatics methods that can be used to explore a given problem related to the functional consequence of gene expression data, and use these methods to carry out a project assignment based on independent work and work in groups.
- analyze and discuss results from a major bioinformatics project assignment in the light of own data and data from scientific articles.
- present results and analyzes from a bioinformatics project assignment as a project report.

Semester of Instruction

The course will not be running spring 2024.

Spring.

This course has a **limited capacity, enrolment is based on application.** The application deadline is **Wednesday in week 2** for the spring semester. You will receive confirmation of whether you received a seat in Studentweb no later than Monday the week after the deadline.

It is compulsory to attend the first lecture/orientation meeting, or you risk losing your seat. If you are unable to attend the first lecture, you must contact the Study Section (studie.bio@uib.no). The time of the first lecture/orientation meeting can be found in the schedule on the course website or on Mitt UiB.

3.2.Required Previous Knowledge

The students should know basic principles of **molecular biology** (MOL100 + MOL200 or equivalent) and must have passed an **introductory course in applied bioinformatics** (MOL204 or equivalent).

Recommended Previous Knowledge

MOL201 and MOL103 (MOL203)

Access to the Course

In order to be admitted to the course, you must be admitted to a study programme at the **Faculty of Mathematics and Natural Sciences** and fulfill required previous knowledge.

Teaching and learning methods

Project exercises and group work.

Compulsory Assignments and Attendance

Project exercises and group work. Completed activities are valid for 3 semesters. The first lecture / orientation meeting is compulsory.

Forms of Assessment

Portfolio assessment. Written semester thesis consisting of individual work (70% of total marks) and report of group work (30% of total marks). Compulsory activity must be approved to take the exam.

Grading Scale

The grading scale used is A to F. Grade A is the highest passing grade in the grading scale, grade F is a fail.

Assessment Semester

Ordinary exam in spring semester. In semesters with no teaching there will be no exam.

3.3.Spring 2023 schedule
Start week 3, end week 19.

Wednesdays 10:15 -12:00 at Høyteknologisenteret

3.4.Short summary of quality rapport
Evaluated as good. Can be found at: [Studiekvalitetsbasen - 2023 Det matematisk-naturvitenskapelige fakultet - (uib.no)](uib.no)

Participants are mainly bachelor and master students from molecular biology, Erasmus and PhD.
In 2019 were 12 students and in 2021 it was 20. In 2019 each student worked individually, and in 2020 and 2021 it was necessary to form groups of 2 or 3 per project topic.
Difficult
Most students experience that the work-load in the course is somewhat large in relation to the scope of 10 ECTS.
Comments on this from the students indicate that:

It can be difficult to balance this subject with other subjects. The course involves a lot of work in a short time, and when students get 'stuck' there is not much immediate help and they must wait for the next weekly session.

4. Biomedical Research Course: Molecular Techniques for Cloning and Expressing of Eukaryotic Proteins (BMED903)

Ph.D. -course

ECTS credits	Teaching semesters	Number of semesters	Language	Level of Study
5	Spring	1	?	Norwegian. Individual supervision in English

4.1. Course description

Course content

The aim is to provide the candidate with practical experience in selected techniques of cloning, PCR and protein expression as well as the underlying theoretical basis for these methods and other similar techniques. In addition, literature and guidance in advanced techniques that the candidate will need, will be given. The candidate should be able to perform similar experiments on their own based on practical and theoretical knowledge gained during the course.

Learning outcomes

Upon completion of the course the candidate should:

Knowledge:

- Master basic knowledge of the practical methods used in the laboratory course and have knowledge of and be able to use other relevant molecular biological techniques adapted to the candidate's PhD project.

Skills

- Master simple cloning, PCR analysis, and to express recombinant proteins in bacteria and be able to use SDS-gel electrophoresis and Western blot techniques.

Competences

- Be able to acquire knowledge of and master the common molecular biological techniques.

Study period

This course is normally only taught in the spring semester.

Spring 2024 this course will unfortunately not be taught.

4.2. Required Previous Knowledge

Who can participate:

PhD candidates in natural/medical sciences.

The course is primarily intended for PhD candidates who are supervised at the Department of Biomedicine, but may also be applicable to candidates within the biomedical research field (medicine or natural sciences) in other departments.

Course registration and deadlines

PhD students at the University of Bergen must register via StudentWeb (studentweb.uib.no) before course start.

PhD students at other Norwegian institutions can apply as external visitig students to the Faculty of Medicine using this form: skjemaker.app.uib.no/view.php?id=2685067.

Deadline: December 1 for spring semester. The applicants must document that they are registered at their home institution. Acceptance is dependent on course availability and personal background. Once you have external visiting student rights, register for the course via StudentWeb before the course start.

Foreign students may participate depending on their scientific background and course availability.

Part of training component

Recommended as part of the training component for PhD candidates at the Department of Biomedicine.

Form of assessment

Oral examination

Grading scale: A-F

Supplementary course information

Compulsory requirements: approved lab journal

Note: if there are few participants the teaching methods can be adjusted in agreement with the participants in order to accomodate the learning outcomes for the participants.

Programme

A full week with lectures and laboratory work under supervision from 8.00-16.00 each day followed by completion of a written lab journal the subsequent week + preparation for the lab course. Total 50 hours. In addition literature of about 200 pages in recent original research articles and reviews adapted particularly to the needs of the candidate.

Academic responsible

Anni Vedeler

www.uib.no/persons/Anni.Vedeler

4.3. Spring 2023 schedule
Start week 3, end week 4. At BBB

4.4. Short summary of quality rapport
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5. Introduction to programming (INF100)

Undergraduate course

ECTS credits	Teaching semesters	Number of semesters	Language	Level of Study
10	Autumn,Spring	1	Norwegian	Bachelor

5.1. Course description

Objectives and Content

Objectives:

The course aims to give the students a thorough and practical introduction to programming by means of a contemporary programming language.

Content:

The course covers central concepts including e.g. variables, expressions, control flow, arrays, and file processing. The lab work consists of compulsory assignments, which are an important part of the course. In several lab sessions, real-life problems from various natural sciences will be solved.

Learning Outcomes

On completion of the course the student should have the following learning outcomes defined in terms of knowledge and skills:

Knowledge

The student

- knows the principles of algorithmic thinking and programming
- understands how computer programming may be used to solve problems, motived by the student's own subject specialisation

Skills

The student is able to

- implement simple computer programs
- make use of available program libraries
- extend and adapt code written by other programmers
- process structured data sets by means of a computer

Semester of Instruction

Autumn and spring

5.2. Required Previous Knowledge

None

Recommended Previous Knowledge
None
Access to the Course

Access to the course requires admission to a programme of study at **The Faculty of Mathematics and Natural Sciences.**

Teaching and learning methods

The teaching consists of lectures and group sessions.

Lectures/ 2 hours per week

Group sessions/ 4 hours per week

Compulsory Assignments and Attendance

The course will have compulsory assignments. The assignments are valid two semesters: the semester when they are approved and the succeeding semester.

Forms of Assessment

The following assessments are used in the course:

- Written (digital) final exam (4 hours). *Date 26.02.2024, 09:00*
- To pass the course, a sufficient number of compulsory assignments and the final exam need to be passed.

Grading Scale

The grading scale used is A to F. Grade A is the highest passing grade in the grading scale, grade F is a fail.

Assessment Semester

Final exam is arranged every semester.

Programme Committee

The Programme Committee is responsible for the content, structure and quality of the study programme and courses.

Course Administrator

The Faculty of Mathematics and Natural Sciences represented by the Department of Informatics is the course administrator for the course and study programme.

5.3. Spring 2024 schedule

Start week 3, end week 19. *Date 26.02.2024, 09:00*

Groups though week from 08:15 – 16:00. At VilVite

5.4. Short summary of quality rapport

-

6. Admission to courses with limited capacity

How to register for courses with limited capacity

You apply for the courses on Studentweb after the registration opens (11 December).

Click "class registration" to save your application.

The deadline for spring class registration is 23:59, Wednesday 10 Januar 2024 (UTC+1).

Enrolment for the courses will be processed by the following monday. Please check studentweb after the results are published.

First priority will be given to students who have the course in question as a compulsory part of their study programme.

Students who have been admitted to the course will be registered for examination.

It is compulsory to attend the first lecture of the courses with limited capacity. If you don't attend, you may lose your place on the course.

6. Admission to courses with limited capacity

Attachment 8.

EMNERAPPORT – INSTITUTT FOR BIOMEDISIN

ANNUAL EVALUATION REPORT – DEPARTMENT OF BIOMEDICINE

Emnekode: *COURSE CODE:*	**BMED320**	Semester / år: *SEMESTER / YEAR:*	**Høst / Autumn 2023**
Emnenavn: *COURSE NAME:*	*Methods in Biomedical Research*		
Emneansvarlig: *COURSE COORDINATOR:*	**Petri Kursula**	**Godkjent:** *APPROVED:* (admin.)	**Utdanningsleder IBM** **29.01.2024**
Rapporteringsdato: *DATE OF REPORT:*	**Jan 29, 2024**		

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%).

22 students were registered for the course, 20 of them Master's students in Biomedical Sciences, and 2 students attending other programmes; 1 student attending the Master's Programme in Pharmacy (MATF-FARM), and 1 student attending The Medical Student Research Programme (MEDFORSKL).

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 previous report is from 2020, while the reports for 2021 and 2022 were unfortunately not finalized as planned/provided.

The evaluation report for 2020 listed following changes planned for 2021:

> To bring the students on a more even level before they enter the labs next semester, the following measures are planned:
>
> - An "entry test", which they have to pass and which will serve as a diagnostic tool to identify on which areas the students should read up during the lecture period before entering the labs.
>
> - A one-day lab tutorial, where Siri, likely with some assistants will go through some of the very basic laboratory methods, common to most research groups at the department.

I wonder if anything can be done to test the students' motivation during the selection of students. Can some interviews by implemented? I think that the students should only give their feedback in mid/end of January when they have gotten their exam feedback and had the chance to resubmit the home exam. This is a quite big part of the course and should be reflected in their feedback on the course. Now all the feedback is from before that. We should try to ensure that more students actually fill in the feedback form. Now it was a very low number.

Comments to these planned changes or other changes made for the 2023 autumn semester:

- Measures have been taken to include lab tutorials and chemical calculation exercises. These require funding, which was not available for the 2023 course.

- The problem with feedback persists. Feedback is collected before the major written exercise is submitted and evaluated, and therefore, is of limited value. Response rate remains very low.

STATISTIKK / STATISTICS (admin.):

Antall vurderingsmeldte studenter:			Antall studenter møtt til eksamen:		
NUMBER OF CANDIDATES REGISTERED FOR EXAMINATION:		20	NUMBER OF CANDIDATES ATTENDED EXAMINATION:		19

Karakter-skala GRADING SCALE	«A-F»	A:	B:	C:	D:	E:	F:
		1	13	4	1	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.

Most students got a B as a grade, which seems to reflect the level of the class. It was a bit surprising that only one student got an A from the home exam, where all materials could be used. One MCQ question in this exam had a typo in it, but this did not affect the grade of any student.

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 1 December to the 22 students registered for the course. Reminders were sent the 19 December and 2 January to those (18 and 16) students that hadn't responded before.
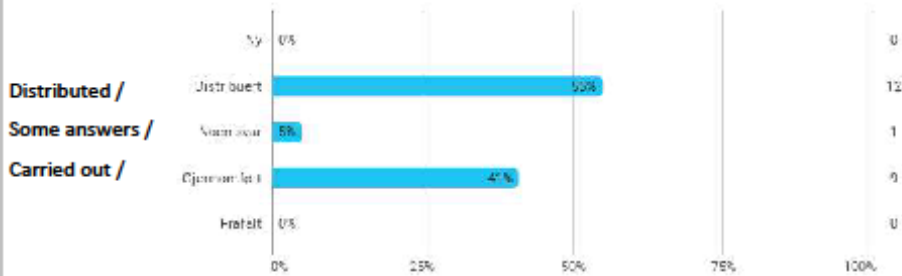
The attendees were asked about the academic content, the organization, and the educational level of the teaching, and asked to evaluate the total workload of the course. They were asked to give their responses

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 5 January 2024, responses from 10 (46 %) students were registered.

Overall status:

Ny /	0%	0
Distributed / Distribuert	55%	12
Some answers / Noen svar	5%	1
Carried out / Gjennomført	45%	9
Frafalt	0%	0

RESULTS:

The limited number of responses were quite varied, and it can be assumed that those that take the time to respond, are the ones that have criticism to show. Most comments relate to two aspects:

1) Lack of communication, for example related to cancelled lectures.

The course has >10 professors giving a lecture, and traditionally, they have been given free hands. It is important to learn from different kinds of teachers. Some lack of communication probably because I was a stand-in as course responsible, and I had many other responsibilities at the same time.

2) Division into pairs and research groups randomly for the lab course.

The course responsible feels this is the fairest possible way, and it exposes the students to new environments. A part of science is communication and work with different kinds of people that you cannot choose. This is a learning process, and one objective of the course is to expose students to "real life". Grading is based on the presentation of the work, not the results themselves, which evens out the effect of the project lottery.

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 was run essentially as before, apart from the fact that the home exam was a school exam instead of a written essay. This change was done due to the sabbatical leave of the course responsible, to reduce the large workload this part of the course has given to the responsible person.

There were some issues related students being randomly assigned to groups, but this has been deemed to be the only fair way, to prevent pre-arrangements with preferred partners and research groups.

All in all, the course ran rather smoothly, and most students seemed content with the outcome.

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

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.

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

FS580.001 Distribution of results
Exam: BMED320 0 HO 2023 HØST
Methods in Biomedical Research - Semester thesis and take-home examinatio   25,0sp
Grading scale: Letter grades - Passed

	Total
Number of candidates (registered):	20
Number appearing at the examination:	19
Number of passes:	19
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	1
C	4
B	13
A	1

Distribution of grades
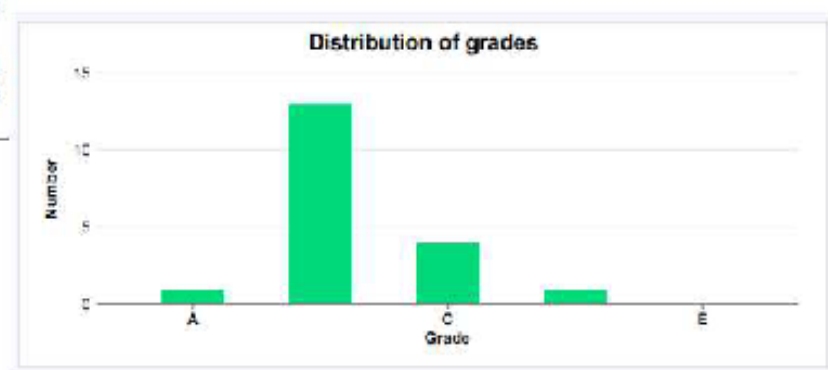
The assessment consists of two parts:
Home exam after completing theory lessons + Submission of term paper after placement in the lab.
The two parts account for respectively 55% and 45% percent of the total exam result.
The results for each part was as follows:

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

Grade	Number
E	1
D	2
C	4
B	11
A	1
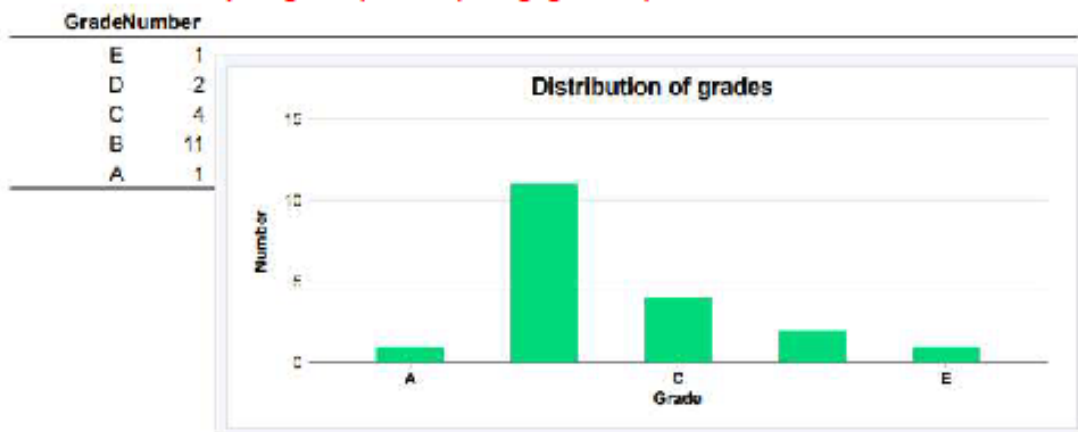
Term paper after the lab (average grade = B):

Grade	Number
E	0
D	0
C	1
B	10
A	7
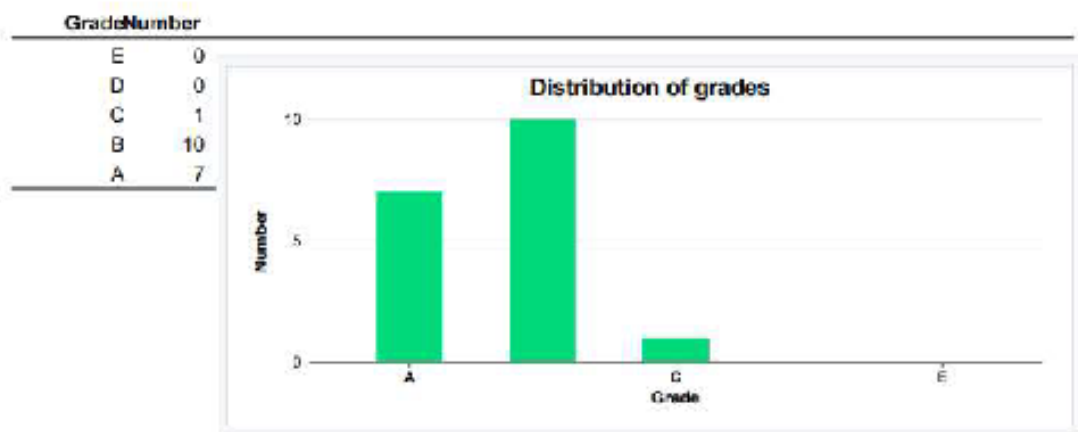
Attachment 3.

EMNERAPPORT – INSTITUTT FOR BIOMEDISIN

ANNUAL EVALUATION REPORT – DEPARTMENT OF BIOMEDICINE

Emnekode: COURSE CODE:	**BMED380**	**Semester / år:** SEMESTER / YEAR:	**Spring – Autumn 2023**
Emnenavn: COURSE NAME:	*Seminar Series*		
Emneansvarlig: COURSE COORDINATOR:	**Harald Barsnes**	**Godkjent:** APPROVED: (admin.)	**Utdanningsleder IBM** 05.01.2024
Rapporteringsdato: DATE OF REPORT:	**January 4th, 2024**		

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.

BMED380 - Seminar Series (5 ECTS) is a course open for students fulfilling the pre-requirement of, at a minimum, a bachelor's degree in biology or molecular biology, or equivalent. In the Master's Programme in Biomedical Sciences it is listed as an approved optional course.

The goal of the course is to provide the participants with an overview of different disciplines in bioscience and to give them training in listening to scientific presentations in English, as well as in interpreting, reflecting over, writing and discussing scientific information using the English language.

In the course the students follow the bi-weekly seminars held at the Department of Biomedicine. In addition, there is a mandatory module on research dissemination at MittUiB that must be completed. The course lasts for two consecutive semesters, starting in the spring semester. Only one of the many attendees this semester followed the seminar series as a student and was registered for an exam.

For the full description of the course, please see: http://uib.no/course/BMED380
For previous evaluation reports, please see: https://kvalitetsbasen.app.uib.no/popup.php?kode=BMED380

The previous evaluation report listed the following planned changes:

The main challenge for the next period of the course will be the reduced budget, as the success of the course highly depends on the quality of the invited speakers. How to make do with less funding and still provide one seminar per week is a question that is currently up for debate at the department level, especially if also trying to maintain a high number of international speakers. Relying on more online seminars via Zoom is of course possible, but should, in the course coordinator's opinion, be avoided. Reducing the number of seminars is also an option but would require a larger reformatting of the course content and should not be done without careful consideration of the consequences.

For the next period, we will also strive to improve the response rate for the student feedback. One option would be to add the general course feedback as part of the mandatory written assignments, or to have a joint in person discussion with all of the students towards the end of the semester. The drawback is of course that the feedback will then no longer be anonymous, hence it can perhaps be used in combination with the existing survey.

Finally, an attempt to attract more students to the course should also be considered. This however highly depends on the future format of the course which therefore first ought to be addressed properly.

Comments to this:

Due to the budget challenges mentioned above, it was in the end decided to reduce the number of seminars in the BBB Seminar series to twice per month. In order to account for the reduction in available seminars a new mandatory module

on research dissemination was created at MittUiB. This allowed us to retain the same number of credits for the course and enabled us to continue more or less as before with regards to the rest of the course.

When it comes to efforts to increase the response rate to the survey, this had to be delayed as there was only one student registered for the exam.

Finally, the goal of attracting more students also was postponed as the uncertain financial situation did not allow us to pursue this further until it was clear that the course would continue and in which format.

STATISTIKK / STATISTICS (admin.):

Antall vurderingsmeldte studenter: NUMBER OF CANDIDATES REGISTERED FOR EXAMINATION:		1	Antall studenter møtt til eksamen: NUMBER OF CANDIDATES ATTENDED EXAMINATION:		1
Karakter-skala GRADING SCALE	«Bestått/Ikke bestått» «PASS/FAIL»	Bestått / PASS:	1	Ikke bestått / FAIL:	-

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.

(No comments, as there was only one student taking the exam.)

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.

With very few students attending the course this year, it was obvious that a survey could not guarantee anonymity. Therefore, no survey was distributed this semester.

The single attendee however gave some positive feedback directly to the course leader during the two semesters and overall seemed to enjoy the current format of the course, including the new mandatory module on research dissemination.

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 new format of the course, with bi-weekly seminars instead of weekly, seems to work well. However, with fewer seminars, and thus a higher percentage of these having to be attended by the students (in order to retain the same number of credits) there is also an increased risk when seminars have to be cancelled due a planned speaker not being able to attend. Thankfully we only had two such cases in 2023, but only for one of these did we fail to find a last minute replacement.

The new mandatory module on research dissemination also seems to work well and was well received. It adds a new element to the course that pushes the students to think more about what makes a good research presentation, thus hopefully improving their own future presentations. However, more experience with this module is required before it can be properly evaluated.

Besides the occasional technical issue, the use of Auditorium 4 seems to be a good fit for the course. Its size is also suitable for the current average number of attendants. We did however notice an issue with the room sometimes being booked by others until right before the seminar was supposed to start. As this can potentially result in a delayed start of the seminar, given that an external speaker will need time to get used to the equipment and get ready for the talk, we have now made sure that the room is always booked from 15 minutes before the start of the seminar.

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

The main goal for the next teaching period will be to work on how to better advertise the course, especially to the master students at the Department of Biomedicine. Besides being on the list of approved optional courses (for master students at the Department of Biomedicine) there does not seem to be much publicity for the course. Perhaps a short introduction of BMED380 as part of the mandatory BMED320 course should be considered?

While this report is focused on the students attending BMED380, a related goal is to also attract a larger crowd in general to the seminar series. This should make for more interesting discussions after each seminar which ultimately also benefit the students. To achieve this, the currently used ways of advertising the seminars (posters, emails, etc.) will be extended to also include adding the seminars to the Outlook calendar for the employees at the Department of Biomedicine.

With regards to the practical execution of the seminar series that BMED380 is relying on we will also work towards making the administration processes more robust, i.e., booking of hotel rooms and reimbursement of travel expenses for the speakers, thus hopefully also reducing the time spent on such activities. This work has already been started and will continue in the current year.

Attachment 9.

Draft, examples of IGS courses for IBM master students

09.02.2024

UNIVERSITY OF BERGEN
The Department of Biomedicine

Contents

Global Health

Undergraduate course

ECTS credits

30

Teaching semesters

Autumn

Course code

GLOBALHEALTH

Number of semesters

1

Language

English and Norwegian

Objectives and Content

Objectives:

The course aims to provide an understanding of major global health challenges with theoretical and practical training at the University of Bergen (UiB) and collaborating institutions in low- income countries.

Content:

The course consists of three parts:

1. Theory and group work (6 weeks) at Centre for International health.
2. Field visit (8 weeks): Observation/participating in health care in a low income country.
3. Exam period.

The first part covers a broad range of aspects concerning global health. Focus will be on major global health challenges. The course will outline the interaction between health and poverty and between health and social, political, economical and cultural factors. Major themes are Public health; Major diseases and disabilities; Global health and ethics; Anthropology,

economics and health systems. Attendance in lectures and group work is compulsory.

The second part of the course is observation and involvement in hospitals and community health care settings in low- or middle-income country.

The third part of the course is writing an essay on an aspect in global health; two students may collaborate on one topic. The essay is presented in plenary and discussed at the end of the semester.

Course information website: https://www.uib.no/en/cih/72094/field-visit

Learning Outcomes

Knowledge:

After the course students are able to

- Explain differences and similarities between low-, mid-, and high-income countries regarding health and demographic development
- Describe the human rights perspective for improving global health
- Describe important global diseases and epidemics
- Outline financial obstacles related to global health
- Discuss priority setting in low-resource settings
- Know the difficulties of diagnostics in LIC
- Describe disease panoramas in low-income countries
- Describe challenges in the health service in low-income countries
- Understand why interventions in low-income countries do not always succeed

Skills:

After the course students are able to:

- Discuss how some important diseases affect development in the society.
- Discuss how various interventions can improve public health
- Assess organizational problems in the health systems of low-income countries
- Discuss ethical issues related to international health
- Master diagnostics with limited diagnostic tools

- Adapt diagnostics of disease to available resources
- Clinically recognize some common diseases at health institutions in low-income countries

General competence:

After the course students are able to:

- Have a global perspective on being a health worker
- Understand the consequences of globalization for medical sciences
- Respect the challenging conditions of colleagues in LIC
- Cooperate with colleagues in low-income countries

Recommended Previous Knowledge - Clinical examination technique

For more information Global Health | Universitetet i Bergen (uib.no)

Global health- challenges and responses

Postgraduate course

ECTS credits

15

Teaching semesters

Autumn

Course code

SDG303

Number of semesters

1

Language

English

Objectives and Content

Objectives:

The objective of the course is to equip the students with concepts and perspectives for the analysis of global health challenges and responses in the context of the Sustainable Development Goals. This course aims for an understanding of the determinants of health, and health systems anchored in specific political, socio-economic, cultural and epidemiological settings.

Content

The course is grounded in the Sustainable Development Goals (SDG) framework, placing at the centre SDG 3 - *Ensure healthy lives and promote wellbeing for all at all ages*. The course is organized around three themes: The global burden of disease; the direct and indirect causes of the disease pattern; and the global and national responses to control and prevent disease and promote health. It prioritizes health challenges that are poverty related and pays particular attention to reproductive, maternal, newborn and child health including nutrition; and infectious diseases such as HIV, TB and Malaria. It also includes perspectives on the emerging epidemics of non-communicable diseasesrelated to life style and environmental- and social change. The course dwells upon the political, socio-economic,

commercial and cultural determinants of health, health seeking and care provision, and discusses health policy and governance on global and national levels with particular focus on health systems, health systems functioning and funding mechanisms.

Learning Outcomes

Knowledge: After the course the student is able to:

1. Describe major historical trends in health and health care development in a global perspective
2. Illustrate the health situation of populations, using common health indicators
3. Discuss the relevance of SDG 3 to the major health challenges globally and the relevance of other SDGs for the attainment of SDG 3
4. Describe the major communicable- and non-communicable diseases, injuries and reproductive health challenges globally, and compare their distribution in different socio-economic contexts
5. Discuss key health interventions and their impact on disease prevention and control
6. Discuss how the social and cultural determinants of health impact health and health seeking
7. Explain the basic concepts of health economics
8. Discuss responsiveness and social and financial risk protection in a health systems perspective
9. Explain how health policies and priority setting impact health systems and health care delivery

Skills: After the course the student is able to:

1. Plan and justify how you prioritize scarce resources in setting up a health system in a LIC
2. Use a health system perspective to analyze health care utilization

General competence: After the course the student is able to:

1. Collaborate and contribute in groups across disciplines, present own work confidently and comment on peer¿s work

Required Previous Knowledge

Proficiency in English at a level corresponding to TOEFL 550 (paper-based) or 213 (computer-based) or IELTS band 6.0 is expected.

For more information [Global health - challenges and responses | Universitetet i Bergen (uib.no)](#)

UNIVERSITY OF BERGEN
The Department of Biomedicine

Epidemiology

Postgraduate course

ECTS credits

6

Teaching semesters

Autumn

Course code

INTH302

Number of semesters

1

Language

English

Objectives and Content

Objective:

This course provides an introduction to epidemiology

Content

The course includes the following main themes:

- Measures of disease occurrence and associations between exposure and disease
- Epidemiologic study designs
- Evaluation and interpretation of results from epidemiological studies.
- Bias. Confounding
- Planning an epidemiologic study

Learning Outcomes

On completion of the course the student should have the following learning outcomes defined in terms of knowledge, skills and general competence:

Knowledge

The student is able to:

- describe basic epidemiological concepts and epidemiological study designs
- discuss how bias and confounding may influence research results
- discuss causality in epidemiological studies

Skills

The student is able to:

- plan an epidemiologic study, under supervision
- measure disease occurrence
- measure risk associations
- recognize how confounders are accounted for in analysis
- justify and explain choices of different epidemiological research designs

General competence

The student is able to critically evaluate and interpret results from epidemiological research presented in scientific and popular media

Required Previous Knowledge

Proficiency in English at a level corresponding to TOEFL 550 (paper-based) or 213 (computer-based) or IELTS band 6.0 is expected.

For more information Epidemiology | Universitetet i Bergen (uib.no)

Observational Epidemiology

Postgraduate course

ECTS credits

5

Teaching semesters

Spring

Course code

INTH356

Number of semesters

1

Language

English

Objectives and Content

To provide an overview of the various observational methods to study health and disease in populations, and enable students to use these methods in practical research.

Content:

The course addresses critical methodological aspects of observational epidemiological studies

- Epidemiology - an overview
- Sampling methods and design effects
- Sample size and statistical power
- Measures of disease occurrence and of exposure-disease association
- Bias, confounding, effect modification
- Surveys and surveillance.
- Cross-sectional study
- Cohort study
- Case-control study

Points to remember in the planning and evaluation of the different study designs.

Learning Outcomes

On completion of the course the student should have the following learning outcomes defined in terms of knowledge, skills and general competence:

Knowledge

The student:

- knows about sampling methods and design effects
- explains the methodological principles of study types in observational epidemiology (surveys and surveillance; cross-sectional study; cohort study; case-control study), and how these study designs differ from each other and from the design of randomized controlled trials

Skills

The student is able to

- compare alternative sampling methods
- calculate sample sizes for surveys, cohort studies, and matched and unmatched case control studies
- calculate measures of disease occurrence and their precision and account for design effect in cluster sample surveys.
- conduct simple analyses in STATA, such as estimating associations between exposures and outcomes, with adjustment for confounding factors
- distinguish the principles of different observational study designs
- evaluate selection- and information biases in these three study designs and discuss how to minimize such bias
- evaluate confounding and interaction, how to differentiate between these, how to deal with these

General competence

The student is able to:

- critically interpret published results from observational studies
- critically interpret published results from observational studies
- collaborate and contribute in groups across disciplines and decently present own work and comment constructively on peers¿ work

Required Previous Knowledge

Proficiency in English at a level corresponding to TOEFL 550 (paper-based) or 213 (computer-based) or IELTS band 6.0 is expected.

A requirement for attending INTH321A/INTH921 is knowledge of basic epidemiology and biostatistics, and the applicants should describe their background in these fields in their applications, which should be accompanied by certificates from biostatistics and epidemiology courses and workshops. We will in INTH321A/INTH921 use Stata® in data analysis exercises, and attending the course MEDSTATA (held as a hybrid face-to-face/online course 2 to 5 January 2024) is a prerequisite for attending INTH321A/INTH921. This requirement may be waived on an individual basis for students who can document competence in statistical analysis using Stata® equivalent to the MEDSTATA course. For such consideration, please contact Linda Forshaw Linda.Forshaw@uib.no.

For more information [Observational Epidemiology | Universitetet i Bergen (uib.no)](#)

Attachment 4.

UNIVERSITETET I BERGEN
Det medisinske fakultet

Programutvalgene ved MED

Referanse	Dato
2024/391-MADA	09.01.2024

Egenvurderinger fra programutvalgene for 2023

Utdanningskvaliteten ved UiB gjennomgås årlig i form av egenvurderinger på emnenivå, programnivå og institutt- og fakultetsnivå. Egenvurderingene ligger til grunn for de årlige dialogmøtene mellom fakultetet og institusjonsledelsen, som munner ut i UiBs samlede studiekvalitetsmelding.

Som en del av dette sykliske studiekvalitetsarbeidet skal fakultetet avholde dialogmøter med sine fagmiljø om utdanningsvirksomheten, og de samme miljøene skal utarbeide skriftlige egenvurderinger. Gitt programstrukturen ved vårt fakultet ivaretas denne kvalitetsrapporteringen her mellom fakultetet og programutvalgene.

Egenvurderinger for 2023
Fakultetet ber programutvalgene om å utarbeide en kort, skriftlig egenvurdering på *maks* 1-2 sider innen fredag 15. mars 2024. Egenvurderingen skal ta utgangspunkt i egenvurderingene fra de emneansvarlige, samt eventuell rapport fra ekstern fagfelle. Det skal også vurderes om planlagte eller gjennomførte endringer på emnenivå påvirker helheten i programmet. Dersom resultater fra Studiebarometeret og/eller andre undersøkelser viser behov for oppfølging, skal dette framgå av egenvurderingen.

Ut over dette ber vi om at programutvalgene også omtaler disse to punktene i sine egenvurderinger:
- Deltakelse på ikke-obligatorisk undervisning. Omtrent hvor stor andel av studentene deltar i ikke-obligatorisk undervisning? Ser man noen endringer over tid?
- Språkkunnskaper hos studentene. Har studentene tilstrekkelige språkkunnskaper i forhold til kravene i studiet? Opplever programmet noen spesielle utfordringer med dette?

Egenvurderingene vil, sammen med drøfting fra dialogmøtene, danne grunnlag for fakultetets samlede studiekvalitetsmelding.

Dialogmøte mellom program og fakultet
Fakultetet ønsker i år som i fjor gjennomføre korte, individuelle dialogmøter med det enkelte program så snart som mulig etter at egenvurderingene er levert. Programutvalgsleder og programkoordinator vil om kort tid få en innkalling til et slikt møte.

Ved spørsmål, ta kontakt med martha.dahle@uib.no.

Dette er et UiB-internt notat som godkjennes elektronisk i ephorte

Det medisinske fakultet	Postadresse	Besøksadresse	Saksbehandler
Telefon 55582086	Postboks 7804	Haukelandsbakken 28	Martha Houen Dahle
post.med@uib.no	5020 BERGEN	Bergen	55586340

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Part of attachment 5.

UNIVERSITETET I BERGEN
Studieavdelinga

Fakulteta

Referanse	Dato
2023/15952-KRILØ	04.12.2023

Høyring - nasjonal samordning av masteropptak

I september 2022 leverte prosjektgruppa for nasjonalt masteropptak rapporten sin til Direktoratet for høgare utdanning og kompetanse (HK-dir). Prosjektgruppa var sett saman av representantar frå UiO, UiB, NTNU, USN, HVL, UiT og Sikt. Gruppa arbeidde med rapporten i perioden 2020-2022, og den er mellom anna eit resultat av ei brei innspelsrunde frå utdanningsinstitusjonar i Noreg. I november 2022 vidaresendte HK-dir rapporten til Kunnskapsdepartementet (KD). Etter vidare dialog med KD ynskjer HK-dir no å starte opp arbeidet med å etablere eit felles nasjonalt masteropptak, og har difor sendt rapporten på høyring til lærestadene.

HK-dir ber lærestadene om å gje innspel på:
- Rapporten og graden av samordning som den skisserer.
- Kva for delar av anbefalt løysing lærestadene.
- Døme frå eigne masteropptak og regelverk som er eigna i eit nasjonalt masteropptak – og regelverk/rutinar det er ønska å ha kontroll over lokalt.
- Finansieringsmodell for eit samordna masteropptak.

Sentrale punkt i modellen som er foreslått i prosjektrapporten
- Søkjarar skal levere ei prioritert liste med søknadsalternativ, innan definerte fristar, og få tilbod om studieplass ved berre ein lærestad.
- Som utgangspunkt skal søkjar vurderast for generelle opptakskrav ein gong/ein stad. Lærestadane skal framleis handsame dei faglege opptakskrava. For søkjarar med norsk dokumentasjon er det eit stort potensiale for automatisk vurdering av heile eller delar av opptaksgrunnlaget.
- Det bør opprettast ein nasjonal vurderingseining for søknadar med utanlandsk utdanning. Eininga er foreslått å vurdere nivå, omfang, språkkrav og om dokumenta er ekte.
- Eit samordna masteropptak må regulerast av eit felles regelverk, og lovgivande myndigheit må fastsetje ei forskrift for opptak til masterstudium.

Dette er et UiB-internt notat som godkjennes elektronisk i ephorte

Studieavdelinga	Postadresse	Besøksadresse	Sakshandsamar
Telefon 55582000	Postboks 7800	Nygårdsgaten 5	Kristian Hole Lønning
eksamen@uib.no	5020 Bergen	Bergen	55585122

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UNIVERSITY OF BERGEN
The Department of Biomedicine

Forslag til svar på høyring

Studieavdelinga utarbeida eit forslag til høyringssvar vedlagt. UiB har i tidlegare innspelsrunde stilt seg positivt til eit nasjonalt masteropptak, og har samstundes understreka viktigheita av å behalde den faglege autonomien til lærestadene.

Forslaget til høyringssvar er på line med det vi har spelt inn i førre innspelsrunde. Om fakulteta har innspel til vedlagte forslag, ber vi om eventuelle kommentarar innan 12. januar.

Venleg helsing

Christen Soleim
avdelingsdirektør

Kristian Hole Lønning
seniorrådgjevar

Vedlegg:
Høyringsbrev frå HK-dir
Prosjektrapport samordna masteropptak
Utkast til høyringssvar frå UiB

Main part of attachment 6.

TOPP/BUNN

1120_MAMD-MEDBI
Universitetet i Bergen
Masterprogram i biomedisin

04 NOKUT

Nedenfor vises de fem enkeltspørsmålene som blir vurdert høyest og lavest av studentene. Spørsmålene kan være en indikasjon på styrker og utfordringer.

Spørsmål	Verdi
Det sosiale miljøet blant studentene på studieprogrammet	4,3
Har handlet om sentrale deler av lærestoffet (pensum)	4,3
Jeg opplever at studieinnsatsen min er høy	4,2
Har krevd forståelse og resonnement	4,2
Det faglige miljøet blant studentene på studieprogrammet	4,0
Jeg får god informasjon om hvilke yrker/bransjer som er relevante for meg	2,6
Det er muligheter for å jobbe med prosjekter/oppgaver i samarbeid med arbeidslivet	2,4
Jeg får god informasjon om hvordan kompetansen min kan brukes i arbeidslivet	2,3
Representanter fra arbeidslivet bidrar i undervisningen (f.eks. som gjesteforelesere/kursholdere)	1,9
Jeg får innføring i hvordan jeg kan formidle min egen kompetanse til potensielle arbeidsgivere	1,8