UNIVERSITETET I BERGEN
Institutt for økonomi

3-Year Course Evaluation for ECON243 Advanced Mathematics and Optimization

Relevant background

Course description

https://www4.uib.no/emner/ECON243

Student evaluations (main categories, the mean of teaching semesters A22-A24)

The following scale is used as a measuring unit:

1 Lite godt

2 Nokså godt

3 Godt

4 Meget godt

5 Svært godt

Number of respondents:

2022	2023	2024
22	30	30

Number of students that ended up completing the exam:

2022	2023	2024
43	51	Exam date hasn't passed at the moment

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Main categories

HOVEDKATEGORI	KARAKTER
Forelesninger	**Svært godt**

HOVEDKATEGORI	KARAKTER
Foreleser	**Svært godt**

HOVEDKATEGORI	KARAKTER
Studenten (egeninnsats)	**Meget godt**

HOVEDKATEGORI	KARAKTER
Seminarene	**Svært godt**

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Course evaluation

Description of the course	
Literature	Mathematics for Economics, fourth edition. Hoy, Livernois, McKenna, Rees & Stengos. The MIT Press. 2022
Forms of assesment	Midterm (30%) and final exam (70%)
Teaching and learning methods	In-person lectures and interactive seminars
Compulsory assignemnts and attendance	Not required
Amount of lectures (numerical value)	18

1. **Briefly discuss whether the course's teaching and evaluation methods allow students to effectively achieve the learning outcomes. Is there a correlation between the students' workload and the credit points awarded?**

   Teaching mathematics using ("chalk and blackboard") lectures to introduce new difficult material and then using interactive seminars to practice these concepts is an established, effective method that can cover a lot of content in a relatively short amount of time (see evaluations). In-person, written pen-and-paper exams are the best way to verify that the students have understood the material and are able to solve common mathematical problems in economics.
   The course workload corresponds to the credit point calculations of required study time per credit point when self-study/homework is taken into consideration.

2. **Describe changes that have been implemented in the last three years or are planned (see also point 3). Do you have good/bad experiences with specific teaching and/or evaluation methods? What about streaming/recording?**

   The main change that took place was replacing a compulsory assignment with a midterm. As grades suggest, this is a more effective way of forcing students to study more regularly (as opposed to only cramming for the exam), which, if academic research on this topic is correct, should also help long-term retention of the material.
   Otherwise all teaching and evaluation methods are received positively by the students and seen as effective by the lecturer/student assistant.

   No streaming or video recording of lectures or interactive seminars is used because it incentivizes attendance, which correlates with better understanding of the material (e.g., because students create study groups in class, or are less intimidated to ask questions in person). I created short video summaries of the main concepts for students who are sick; these are meant to be used in tandem with the textbook to catch up.

3. **Provide an account and assessment of the main findings from the student evaluations (attached). Comment on the course completion rates and grades (attached).**

   As the student evaluations (and number of students who take the course as an elective) show, this is a very popular and well-received course. The students understand its importance for their study progress, and appreciate the teaching methods they are exposed to.

   Naturally, not all students complete the course, but note that the grade distribution is skewed towards Bs, i.e., good grades. This is not artificially manipulated: the exams are not graded on a curve, but rather all students are individually evaluated based on their mastery of the material. As such, the observed grades and completion rates are reasons for optimism.

4. **Synes du læringsutbyttet i kurset/ kursets faglige innhold burde endres (f.eks. for å bedre passe med programmets mål, endringer i faget etc.), og i så fall hvordan?**

   Yes. I wish the study programs had an additional slot for an advanced mathematics course, since the assigned topics that "need" to be covered should be taught across two courses, not one. This would allow the lecturer to slow down a little (see student evaluations that this would be appreciated by the students).

5. **Do you use external lecturers in the course? If yes: What is your experience with this? If no – why not?**

   No; mathematics on this level is very standardized and does not need "alternative viewpoints". Without externals this course fits very well together and all topics are given the same amount of attention and are taught in the same way, making it easier for students to make connections between topics.

6. **Is there anything you wish were different in your course or related to your or the students' work situation?**

   Nothing else to report.

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The program board's comments on the evaluations

A. The program board agrees that a written exam works in a course like this. Here, portfolio assessment with two such elements (30/70), both of 2 hours, has been chosen.
B. The program board cannot see that there is currently an opportunity to add a course in mathematics. We would like to have a discussion with the course responsible about which topics are perceived to "must" be included, in order to reduce the number of topics in the course if possible, and we suggest that we do this spring semester 2025. The undervisningsleder will contact you.
C. We agree that in a course like this, it is not important to involve external guest lecturers.