

**Master in Health Economics, Policy and  
Management (HEPMA), University of Oslo**

**External periodic program evaluation 2021**

## **Assignment**

By letter of 11 February 2020, the Medical Faculty, University of Oslo appointed the below panel to evaluate the master programme in Health Economics, Policy and Management (HEPMA). The deadline was originally set to 5 June 2020, but was extended to 1 February 2021 after a request from the evaluation panel. Pål E. Martinussen was appointed as coordinator of the panel.

### ***The evaluation panel***

Professor Pål E. Martinussen, NTNU

Associate partner EY/Associate professor Bjørn Erik Mørk, BI Norwegian Business School

Associate professor Anne Wenche Emblem, University of Agder

Student representative Rakel Ingrid Kamsvåg

### ***The work of the panel***

Due to the COVID-19 restrictions, the evaluation panel did not meet physically. Instead, several digital meetings were held. All panel members were present at the meetings. There have not been any disagreements in the panel with respect to the factual basis or the recommendations made in the report. As is common with such evaluations, the student representative has provided valuable nuances and details to the information in the written material made available to the panel. The student participation has made it possible to “validate” the information found in the written material (see below). However, there were no discrepancies between the information in the written material and the views brought forward by the student representative.

We believe that the submitted material, together with the views promoted by the student representative, provides a good overview of how the students evaluate the programme at present.

### ***The documentation basis for the evaluation***

The internal evaluation of the master programme was made available to the members of the evaluation panel on 30 November 2020. The panel also had access to previous external program evaluations, as well as information on the programme available online. Furthermore, we asked for – and was provided with – additional information on aspects related to study progression, admission criteria and grade qualifications, man-labour years allocated to the programme

(scientific and administrative staff), criteria for allocation of supervisor on master's thesis, possibilities for exemptions on "overlapping" subjects, and availability of re-sit examinations.

We have also conducted interviews with three staff members, as well as with two students.

Finally, the panel's external members also have some prior knowledge of the programme through participation as sensors and guest lectures.

The above sources make up the basis for the recommendations from this evaluation panel.

### ***Evaluation criteria***

The panel has based its evaluation on the guidelines provided in the appointment letter from the Medical Faculty, which emphasises the following four main points:

1. Achievement of the objectives described in the program plan
2. Coherence between the program's planned learning outcomes, scientific content and teaching and -evaluation forms
3. Study quality of the program and potential measures to improve it
4. Whether the program should be continued, changed or terminated

The evaluation of points 1 and 2 is based partly on the presentation of the study program on the university webpages per January 2021, partly on the internal evaluation report, and partly on interviews. In evaluating point 3 the panel has also drawn on its knowledge of relevant studies at other universities/university colleges.

### **Achievement of the objectives as described in the program plan**

The evaluation panel did not receive any documents explicitly stating the HEPMA program's objective. We therefore explored the information provided on the HEPMA-program webpage. Here, the closest resemblance to a program objective is the following statement, although it is not explicitly highlighted as the program aim:

*“Knowledge of health economics, policy and management is in demand all over the world, on local and national levels. Internship and exchange throughout the study programme will further give you opportunities to develop networks in Norway and abroad. Choose between a specialization or the General programme which combines all three fields: Health Management, Health Economics and Economic Evaluation.”*

The lack of a clearly formulated program objective was also noted by the periodic program evaluation undertaken in 2015. In the evaluation it was pointed out that the aim of the program was not formulated as a specific aim but was instead limited to describe the technical and organisational aspects of the master’s degree. This still seems to be the case, as the 2020 internal evaluation report provides no program objectives, only a description of the composition of the program and the academic content. The 2015 evaluation panel recommended a revision of the aims of the HEPMA to better reflect the overall ambitions of the program and the multidisciplinary nature of the program, and this evaluation panel can only echo this recommendation. Our interviews with representatives from the staff indicate that there is a common agreement that the aim of the program is to educate students to economic-administrative tasks in state and local administration, health enterprises, pharmacy industry and other national and international health-related organisations. A formulation of more explicit objectives along these lines will communicate the program aims with respect to career and qualifications of its graduating candidates. The program educates candidates with qualifications that are in high demand by the health care sector, and given that the program has been somewhat less successful in producing candidates for the international market and the private sector, a clearly stated program objective may help increase the candidates’ attractiveness also in these areas.

The formulation of explicit program objectives should help clarify the ambitions with respect to skills and knowledge that the students should achieve. A clear impression from the staff and student interviews is that there is a too strong emphasis on the specialisation in economic evaluation at the expense of the other specialisations in the program, in particular that of health management. As one of the interviewed students observed: “given that the title of the master is health economics, policy and management, it should emphasise more than only the economic part”. The master program needs to better incorporate all three aspects into its portfolio of courses, and the program objectives should reflect this. In doing this, the department should

have an internal discussion about whether it is indeed feasible (in terms of resources) to continue with the specialisation in management. This was brought up by both students and staff in the interviews, and it seems necessary for the department to take this principal discussion.

### **Coherence between the program's planned learning outcome, scientific content, teaching and evaluation forms**

It is our opinion that the HEPMA program is generally well designed and structured, and highly adapted to the requirements of higher administrative levels of the health sector as well as industries within the fields of health technology and pharmaceuticals.

As mention earlier, there seems to be no explicit program objective, and the same applies to that of learning objectives. Based on the information available on the program web site, the overall learning outcome for this program is:

*“By choosing a specialization in Health Management, Health Economics or Economic Evaluation, you will be able to go into depth in a field that specifically interests you. If you rather would like to gain a broader perspective of Health Economics, Policy and Management, you must choose the General programme which will give you the opportunity to gain knowledge, skills and competencies from all three fields.*

*Upon completing the programme, you should be able to have knowledge, skills and competencies of the specialization/general programme you have chosen:*

- *Health management*
- *Health economics*
- *Economic evaluation”*

There is thus no overall learning outcome for this program, despite the fact that all students through the first semester will obtain general, although not in-depth, knowledge within a broad range of topics, among which are Health law, Statistics, Medicine. Also, all students will obtain knowledge on the fundamentals of Health economics, Management and Health care systems, irrespective of their choice of specialisation. The program hence provides its students with an overall and broad understanding of various topics and areas, all of which are relevant to the health care sector. In our opinion, this should be communicated to potential students and the outside world through stating a more precise program learning outcome. Also, the overall

learning outcome after two years of study ending with a master thesis within Health Economics, Policy and Management should be highlighted.

According to the Internal evaluation report, the HEPMA program is closely integrated to current research. Many, if not all, of internal lecturers are also active researchers, and it thus seems reasonable to conclude that the scientific content of the program is good and reflects state-of-the-art. Our interviews with students tell that the quality of the teaching is high, and that the overall results on the exams are good. Based on the information on the different specializations, there seems to be good variation in forms of teaching overall. This is however not explicitly stated on the program's web pages. The same applies to the issue of program's evaluation forms. While this is information that is easily available for each of the courses in the program, this is not addressed at the program level.

Summing up, although there seems to be an internally common understanding of what is the program's learning outcome, this is not clearly communicated to the outside world. The program employs very qualified lecturers who often also are active researchers and who are involved in projects that are relevant to the courses taught in HEPMA. This may ensure that the program offers an education that is relevant and up to date. This is indeed an asset that should be highlighted and used to better promote the program.

It is our impression that there is overall a good coherence between the program's planned learning outcomes, scientific content and teaching and evaluation forms, but this is not explicitly communicated, e.g., through the program's official web pages.

## **Study quality of the program and measures for improvement**

### ***The program's relevance for future studies and/or employment***

There is little doubt about the program's high relevance for both employment and further studies. We have in the last decades seen a wave of healthcare reforms in many countries, typically involving the introduction of competition, business-like management principles, patient rights and patient choice, activity-based financing, separation of purchasers from providers, closer monitoring of performance, and performance-based contracts. These are all organisational changes that are strongly emphasised in the HEPMA courses, thus providing the

students with knowledge and competence that are in high demand. Increasing expenditures on health and health care services along with tighter budgets and limited access to qualified health personnel will also contribute to the demand for graduates with this type of competence, and in particular within the fields of economic evaluation. Even if the program's focus is on public healthcare, the content of the program should also be relevant for private providers of health services. Furthermore, with its solid foundation on research-based knowledge, the program should also provide for a high international relevance.

### ***Learning objective and learning outcome***

The program has a combination of various courses and ends with the master thesis in the 4<sup>th</sup> semester. In the 1<sup>st</sup> semester all students take the same six introductory courses: Fundamentals of health economics (HECON4100), Fundamentals of management (HMAN4100), Fundamentals of statistics (HMET4100), Fundamentals of health care systems (HGOV4100), Fundamentals of health law (HLAW4100) and Fundamentals of medicine (HMED4100). The structure and composition of the introductory courses is logical and coherent and serves to provide students with a sound introduction to the most relevant and basic subjects needed before entering the specialisation. This offers the students a broad overview of topics that are relevant for most types of positions within the healthcare sector. Students need to pass all these 5 credit courses before they can start with the 2<sup>nd</sup> and 3<sup>rd</sup> semester courses. In the final semester the students work with the master thesis. Over time the program has changed between offering 5 and 10 credit courses, which is partly due to the need to align the course portfolio with international collaborators. However, more recently some courses were merged to 10 credit courses. Offering many 5 credits courses constitutes several potential challenges: it is more demanding to balance between deep and surface knowledge, it leads to more work for both faculty and the administration, and it can be more demanding to make links between the different courses. Figure x gives an overview of the program structure.

*Figure 1: Overview of the course composition in the program*

4th semester	HMM4501 – Master thesis					
3rd semester	Specialisation					
2nd semester	Specialisation					
1st semester	HECON4100 – Fundamentals of Health Economics	HMAN4100 – Fundamentals of management	HMET4100 – Fundamentals of statistics	HGOV4100 – Fundamentals of Health Care Systems	HLAW4100 – Fundamentals of Health Law	HMED4100 – Fundamentals of medicine
Credits	5 credits	5 credits	5 credits	5 credits	5 credits	5 credits

Despite of these changes, HEPMA still offers mainly 5 credits courses. The exceptions are four courses: Modelling in economic evaluation II (HEVAL5130), Methods for effectiveness evaluations in healthcare (HEVAL5140), Finance and investment (HFIN4210) and Leadership, management and organization development (HMAN4210). The program thus mainly offers a general and broad, rather than in-depth, competence. While this may not necessarily constitute a problem in itself, it is important that program directors, lecturers and students acknowledge that it leaves the master's thesis as the only element of acquiring in-depth competence in the program.

In the following we elaborate on the learning outcomes and relevance for future studies and/ or employment for each of the three specialisations in HEPMA.

### Economic Evaluation in Healthcare

According to the learning outcomes of this specialization, students will gain knowledge of economic theories, models of health programme evaluations and key theories of decision making under uncertainty. Students will acquire practical skills in making decision tree models, to develop models for economic evaluation and assess their uncertainty, and to develop and perform health technology assessment studies. Also, students will acquire competence in recognizing different frameworks for decision making and earn experience in various methods to estimate the effects of treatment or policy interventions.

The course portfolio (per 2019) in this specialisation consists of the following elements:



4th semester	<a href="#">HMM4501 – Master thesis</a>					
3rd semester	<a href="#">HMET4210 – Research Design *</a>	<a href="#">HEVAL5130 – Modeling in economic evaluation II</a>		<a href="#">HEVAL5140 – Methods for effectiveness evaluations in health care</a>	Elective course	
2nd semester	<a href="#">HEVAL4200 – Fundamentals of economic evaluation in health care</a>	<a href="#">HEVAL5120 – Modeling in economic evaluation I</a>	<a href="#">HMET5130 – Linear Regression Analyses</a>	Elective course	Elective course	Elective course
1st semester	<a href="#">HECON4100 – Fundamentals of Health Economics</a>	<a href="#">HMAN4100 – Fundamentals of management</a>	<a href="#">HMET4100 – Fundamentals of statistics</a>	<a href="#">HGOV4100 – Fundamentals of Health Care Systems</a>	<a href="#">HLAW4100 – Fundamentals of Health Law</a>	<a href="#">HMED4100 – Fundamentals of medicine</a>
	5 credits	5 credits	5 credits	5 credits	5 credits	5 credits

\* begins teaching at the end of 2nd semester, exam and credits is assigned to 3rd semester.

This specialization has 6 mandatory courses during the second and third semester: one course in the fundamentals of evaluation in health care (5 ECTS points), two courses in modelling in economic evaluation (a total of 15 ECTS points), one in linear regression analysis (5 ECTS points), one course in methods for effectiveness evaluations (10 ECTS points) and one course in research design (5 ECTS points, all specializations). The course portfolio thus allows for in-depth knowledge in evaluation modelling and effectiveness evaluation. In addition, students are required to take a total of 20 ECTS points in elective courses which offers broader knowledge and skills within health economics, management and research methods. The elective course HMET5140 Non-parametric methods offers an extension of the mandatory course in linear regression analysis. The portfolio of courses offered are well aligned with the overall learning outcome of this specialization.

To sum up, the recommendations from the 2015 evaluation have been implemented and the individual aims for the specialization in Economic Evaluation in Health care are well aligned with the descriptions and content of the mandatory courses.

This specialization is the most popular specialization among the students. This may be because this specialization is somewhat unique and not offered as such at other Norwegian universities, but also because the labour market for this type of competence is good, both nationally and internationally. This specialization offers knowledge and practical skills that are in high demand in many parts of the health care industry (pharmaceutical, health technology firms), health care sector (specialized and primary health care sectors) as well as Ministries and Directorates. Presumably, the demand for this type of competence will not decrease; growing health care expenditures and tighter budgets will make health economic evaluation even more important. Also, students may pursue further studies.

#### Health economics and policy

Health economics and policy aims at providing the students with knowledge on i) the key analytical reasoning and tools of health economics and their normative foundations and ethical implications, ii) basic economic theories and models of regulation applied to health care providers as GPs, hospitals and long-term care organizations, and iii) the health-related behavioural determinants and an overview of some recent policies aimed at improving the populations' lifestyles. According to the course description, this will provide students with the skills to use economic models to understand behaviours of actors in the health care sector, do analyses of needs for health care services, make analyses of efficiency and quality of health care organizations, find and utilize relevant data sources describing, and use relevant econometric models for the analysis of the economic agents' behaviour. This will lead to the competence to apply economic concepts and models to the fields of demand for health, demand for health services, demand for health insurance, provision of health insurance and provision of health care, and the competence to describe, analyse and critically address economic aspects of health care organizations.

The course portfolio (per 2019) in this specialisation consists of the following elements:

4th semester	<a href="#">HMM4501 – Master thesis</a>					
3rd semester	<a href="#">HEVAL5140 – Methods for effectiveness evaluations in health care</a>		<a href="#">HMET4210 – Research Design *</a>	Elective course	Elective course	Elective course
2nd semester	<a href="#">HFIN4210 – Finance and Investment</a>		<a href="#">HECON4210 – Demand for health and health insurance</a>	<a href="#">HECON4220 – Paying Providers of Health Care</a>	<a href="#">HMET5130 – Linear Regression Analyses</a>	Elective course
1st semester	<a href="#">HECON4100 – Fundamentals of Health Economics</a>	<a href="#">HMAN4100 – Fundamentals of management</a>	<a href="#">HMET4100 – Fundamentals of statistics</a>	<a href="#">HGOV4100 – Fundamentals of Health Care Systems</a>	<a href="#">HLAW4100 – Fundamentals of Health Law</a>	<a href="#">HMED4100 – Fundamentals of medicine</a>
	5 credits	5 credits	5 credits	5 credits	5 credits	5 credits

\* begins teaching at the end of 2nd semester, exam and credits is assigned to 3rd semester.

The specialisation in health economics and policy has six mandatory courses: three courses in health economical topics and three courses in methods. The courses in health economics cover basic and relevant themes such as financing and investment, risk and uncertainty, demand for health and health services, demand for health insurance and provision of health insurance, and basic theories and models of economic incentives in the field of payment schemes / revenue schemes for health care providers.

The methods courses cover linear regression modelling, research methodology, the theory and practice of different methods to estimate the effects of a health intervention/policy intervention and how to design interventions and conduct experiments to measure causal effects. While the methods courses seem to cover the essential topics needed and appear well adapted to students in this specialisation, the panel suggests that the more basic course in research design could

perhaps be offered before the course in regression analysis, and not vice versa, which is the case today. Also, we are a bit concerned whether a 5 credits course is enough to provide a satisfactory introduction to linear regression analysis. The experience of this panel is that similar courses are typically at least 7.5 credits, often 15 credits. In that respect, the learning outcomes seem rather ambitious: to be able to perform linear regression analyses in practice, to check that assumptions of the model are fulfilled, and to identify confounding variables and understand why they are confounders. The evaluation panel thinks it may be a bit too challenging to make students grasp this in just a 5 credits course.

Finally, it is very hard to find the ‘policy’ in ‘health economics and policy’. The mandatory courses touch exclusively upon health economic subjects. This also mainly applies to the elective courses, and of the few non-health economic courses, none covers the policy aspect: qualitative methods (HMET520), leadership, management and organisation development (HMAN4210), internship (HMAN4230), integrated care models (HMAN5160) and policy analysis and evaluation ((HMAN5180). We therefore suggest to either remove the word ‘policy’ altogether from the course or to actually introduce some health policy into the course. If the latter is chosen, there are several good books that could provide a basic introduction to health policy. Blank et al.’s (2017) excellent “Comparative health policy” is used in the first semester course “Fundamentals of health care systems” (HGOV4100), providing a sound comparative perspective, which could be further built upon. Other good introductions to health policy are Buse et al.’s (2012) “Making health policy”, Crinson’s (2009) “Health policy. A critical perspective”, and Mahon et al.’s (2009) “A reader in health policy and management”.

The course could also include a short and elementary introduction to the public policy-making process, focusing on the different stages such as agenda-setting, policy-formulation, decision-making, implementation and evaluation. Such a policy component would also complement a possible stronger emphasis on the context of healthcare management in the health management specialisation, which was suggested by the 2015 periodic evaluation. The 2015 panel noted that since a fair share of graduates work in the Norwegian public administration, there may be a need for students to gain insight in the political nature of the Norwegian public administration compared to other countries. Clearly, it might help recruiting more political science students (which is a stated ambition in the internal report) if the course in health economics and policy actually contained a policy component.

### Management of healthcare institutions

The specialization in management of healthcare institutions has defined many relatively ambitious learning outcomes. Students will gain knowledge of the management tools and techniques used to design and manage successful organizations, core financial accounting and control principles, the work of management accounting, incorporating budget preparation and budget appraisal, and ethical principles and principles of priorities. Furthermore, through taking this specialization they will acquire many skills. They will learn how to analyse and evaluate complex policy and organizational challenges at both the micro level and at higher levels within health care systems, differentiate between the functions, roles and responsibilities of healthcare managers, and how to make successful negotiations. They will also learn how to define and apply key quality concepts in health care organizations, manage organizational processes, including redesigning organizations, effectively and efficiently foster innovation within care settings, demonstrate personal and professional ethical responsibility in all managerial and organizational decision making. In terms of general competence, students will attain competences of organizational analysis, of communication, of medical ethics, and to meet challenges on a multitude of levels within health care systems.

The course portfolio in this specialization consists of the following elements:

*Figure 2: Overview of the course portfolio in the Management of Healthcare Institutions Portfolio*

4th semester	<a href="#">HMM4501 – Master thesis</a>					
3rd semester	<a href="#">HMET4210 – Research Design*</a>	<a href="#">HMAN5160 – Integrated Care Models</a>	<a href="#">HMAN5180 – Policy analysis and evaluation**</a>	Elective course	Elective course	Elective course
2nd semester	<a href="#">HFIN4210 – Finance and Investment</a>		<a href="#">HMAN4210 – Leadership, Management and Organization Development</a>		Methods course	Elective course
1st semester	<a href="#">HECON4100 – Fundamentals of Health Economics</a>	<a href="#">HMAN4100 – Fundamentals of management</a>	<a href="#">HMET4100 – Fundamentals of statistics</a>	<a href="#">HGOV4100 – Fundamentals of Health Care Systems</a>	<a href="#">HLAW4100 – Fundamentals of Health Law</a>	<a href="#">HMED4100 – Fundamentals of medicine</a>
	5 credits	5 credits	5 credits	5 credits	5 credits	5 credits

In addition, the students must choose between either HMET5120 – Qualitative methods or HMET5130 – Linear Regression Analyses. The 5 credit elective courses that they must choose from are:

- HECON4210 – Demand for health and health insurance
- HECON4250 – Cost and efficiency analyses of health care providers
- HECON4220 – Paying Providers of Health Care
- HECON4260 – Need analyses, risk adjustments and formula funding
- HEVAL4200 – Fundamentals of economic evaluation in health care
- HEVAL5120 – Modeling in economic evaluation I
- HEVAL5130 – Modeling in economic evaluation II
- HEVAL5140 – Methods for effectiveness evaluations in health care
- HMAN4230 – Internship
- HMET5120 – Qualitative methods

- HMET5130 – Linear Regression Analyses
- HMET5140 – Non-parametric methods

Consequently, the elective courses cover to a relatively limited extent healthcare management as such, which is something that also was highlighted in the interviews.

When we look at the learning outcomes and the course portfolio for this specialisation we have some concerns. First of all, there are probably too many defined learning outcomes and several of them also seem to be too ambitious. For instance; to what extent is it actually possible to learn how to make successful negotiations from this programme? Often this is something one will not be able to learn until you have been a practitioner for many years. Another example is that they will learn how to effectively and efficiently foster innovation within care settings. This is also something that can be difficult to learn unless you practice over a longer period of time. The challenge with too many defined learning outcomes is also the case for several of the courses. One example is the course HMAN4210 – Leadership, Management and Organization Development, which has defined seven learning outcomes for knowledge, five for skills and three for general competence. It is more common to define three-four learning outcomes for knowledge, three for skills and three for general competence. By doing so it becomes clearer both for faculty and the students what they can expect to learn. It also makes it easier to have constructive alignment between learning outcomes, activities and the evaluation form. In this particular course we also notice that the reading list contains many book chapters from influential academics, and relatively few articles that represent the research frontier in this domain. This is for instance illustrated with the fact that students should learn about teams, but they do not read any of the original articles by Harvard Business School Professor Amy Edmondson who is considered the leading expert in the world on this topic. In addition, both for this course and for the specialization in general we notice that topics such as innovation (despite being mentioned in the learning outcomes) and digitalization are given relatively scant attention even though this is highly relevant for anyone working in the healthcare sector. Moreover, several internationally leading journals in healthcare management are to a limited extent represented. This includes, but is not limited to, the Academy of Management Journals (Academy of Management also has a Health Care Management division), Organization Science, Administrative Science Quarterly, Organization Studies, Human Relations, Journal of Management Studies and so forth. All these journals are publishing on a regular basis research representing the research frontier within healthcare management.

This specialization also offers fewer specialization courses than some of the other specializations. This means that students choosing this specialization become less specialized and have less flexibility than students choosing for instance evaluation. Based on our interviews, it seems that several students have therefore changed from this specialization to the general, as the students were not aware of these challenges until they had completed their first semester.

### ***Teaching and evaluation forms***

The internal evaluation and the interviews indicate that there are more variations in teaching forms now than what was the case in 2015. In several courses mandatory sit-ins are used, and the experiences so far seem to be positive. There are variations between the courses in terms of how teaching-intensive they are. While in some courses there are also extensive seminar and student activities, this is not the case with all courses. In for instance the management courses there is also use of both flipped classroom teaching and project-based learning. In the health evaluation specialization, lectures, instruction, group work and/or seminars are made compulsory in some courses. Courses subsequently vary with respect to evaluation forms: written school exam (4 or 8 hours), home exam or term paper (HEVAL5140). Also, there is variation with respect to whether students are required to have passed compulsory home exercises or presented a paper in class. Thus, students are in many of the courses expected to demonstrate both knowledge and skills throughout the course.

Covid-19 has triggered extensive use of digital teaching, and how this is conducted in practice varies from pre-recorded lectures with follow-up sessions to streaming. It remains to be seen what effects this will have. The internal evaluation underscored that even though digital teaching will continue to a larger extent than in the past, physical teaching based on lectures on campus is still the preferred format. Our impression from the student interviews is that students are mostly satisfied with the teaching. However, given the fact that many students potentially may end up working in different positions in health and care, the limited use of practitioners that can share from their own experiences and that could bring in potential research questions to explore in master theses and so forth is somewhat surprising.



Inspira has recently been implemented as the exam-tool. By doing so it is possible with digital exams, and it is more efficient for structuring, assessing and evaluating the exams. The internal evaluation describes that the experiences with this change has so far been good, and that it enables students to follow teaching and to do their exams off-campus.

### ***Active learning***

The previous evaluation concluded that students seem generally satisfied with lectures and teaching style, describing the teaching staff as very friendly and welcoming, and with low thresholds for asking questions in class or for calling at their office door. It is our impression that this is still the case. The earlier suggestions to incorporate more variation in teaching styles, with more use of seminars and project-based teaching, and more case-examples in order to better understand the presented theories has been followed up through the application of more project-based learning and teaching (e.g. various forms of flipped-classroom learning and teaching), particularly in the management courses. In the specialization Health Evaluation, learning outcomes includes both theoretical knowledge and practical skills. Courses are thus characterized by a mix of self-studies, lectures, seminars, instructions, group work and computer exercises with the use of software (e.g., Excel and Stata).

The students we interviewed report the courses to be generally well targeted towards the health sector and close to the practice field. There seems however to be a desire for more guest lectures with experience from the healthcare field, such as physicians. According to our information, plans were made to use more external lecturers, but this was made difficult because of Covid-19. This appears somewhat counterintuitive, as we would assume that the current situation would rather make it easier to invite guest lecturers, with most of us working from home.

Based on our interviews, there seems to be a general impression among students and staff of improvement potential when it comes to involving students more actively and bringing the teaching more closely in touch with the practice field. This can be obtained by increasing the share of guest lecturers and/or hiring temporary external lecturers (which would also help reduce the staff workload), possibly combined with excursions to local healthcare institutions or organizations working with healthcare related matters.

### ***Relationship between learning outcome, teaching and exam***

The relationship between learning outcome, teaching and exam is in the pedagogical literature described as constructive alignment. This refers to how “the objectives express the kinds of understanding that we want from students, the teaching context encourages students to undertake the learning activities likely to achieve those understandings, and the assessment tasks tell students what activities are required of them, and tell us how well the objectives have been met” (Biggs 1999: 57; Biggs and Tang 2011<sup>1</sup>). Constructive alignment matters because whereas the students will often focus on how their performance will be evaluated at the end of the course, the teacher may be focusing on other aspects. The purpose of constructive alignment is to make it difficult for the students to escape without learning what is intended to be learned (Biggs and Tang 2011). Biggs and Tang (2011: 121) underscore that the intended learning outcomes “should be clear as to what kind of knowledge you want and why”.

The interviews with the staff indicate that they have a good understanding of the importance of the relationship between learning outcomes, teaching and evaluation. In the internal evaluation we also read on page 25 that “It is our opinion that the learning aims, content, teaching forms and exam forms used in HEPMA are well adapted and internally consistent. The program is integrated closely to ongoing research, and the students graduated from HEPMA are in possession of skills that are valued in society and among employers.” For the most part we agree with this statement, but at the same time we also observe that in some of the courses there are too many learning outcomes, and they also appear as too ambitious in terms of what is realistic to learn during such short courses. In the student interviews we were also told that for HMET 5130, HMET 5130 and HEVAL 4200 the learning outcomes, teaching activities and evaluation were experienced as clear and well-structured, while for HEVAL 5140 this was not the case. Hence, it was unclear for some of the students at what level they should perform on the exam. In other words, it was experienced as lack of constructive alignment.

### ***Student workload***

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<sup>1</sup> Biggs, J. (1999). What the student does: Teaching for enhances learning. *Higher education research and development*. 18 (1): 57-75.

Biggs, J., & Tang, C. (2011). *Teaching For Quality Learning At University*. McGraw-Hill Education (UK).

From the interviews of the students, we learned that the student workload is in line with what they expected from taking this program. At the same time both the interviews and the internal evaluation interviews indicate that the workload is somewhat unevenly distributed across the different semesters, as well across the different specializations. The first semester is particularly work-intensive due to the many 5 credits courses, and the specialization in health evaluation is considered somewhat more demanding (and time consuming) than the other specializations. In addition, the distinction in workload between 5 credits courses and 10 credits courses is experienced as limited.

The completion rates for HEPMA gives little cause for concern, as the average is about the same as that of the overall completion rates of Norwegian master's degrees.

### ***Target group/recruiting***

According to the internal evaluation the HEPMA program has in the period 2017 –2020 had a 40 percent increase in number of applications. This in contrast to the previous three years where the number was stable after a period with reduction. This may change with increasing competition from similar programs in Norway and abroad. HEPMA is therefore working to promote the program as research-based, and for increasing the awareness about the program among employers and potential candidates. The share of Nordic candidates has remained relatively stable over time.

There is an impression among staff that it is relatively easy for students to get a job after graduation. There is however little systematic knowledge on which jobs the students end up in, and acquiring this type of information might help targeting the recruitment strategies even more.

*Figure 3: Overview of applicants to the HEPMA program (source: Internal evaluation page 16).*

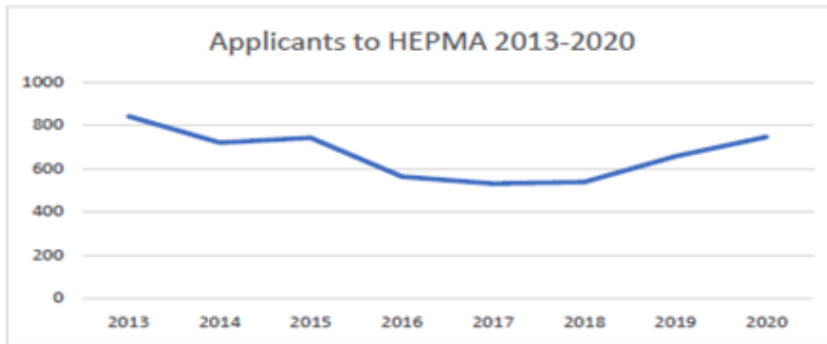


Figure 1. Applicants to HEPMA 2013-2020 (Nordic and international applicants)

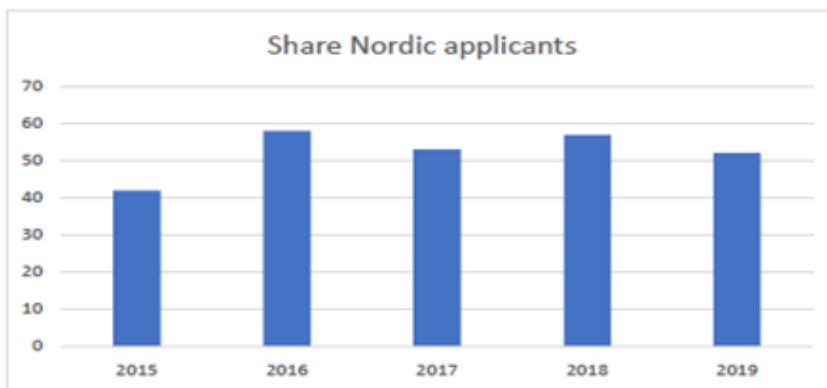


Figure 2. Share of total applicants coming from the Nordic countries

As regards the educational background of the students, the internal evaluation shows that in 2019 the students had following educational background (bachelor's degree): 38% in health science, 31% in economics, administration/management, 14% in other social science, 5% public health, and 4% others. In the internal evaluation it is stated that the ambition is to recruit more students with a background from political science and economics.

### ***Universal design and arrangements for students with disabilities***

According to the internal report from 2020, HELED follows the rules at the University of Oslo when it comes to arrangements for physically disabled students. All the study programs at HELED have a contact person for persons with disabilities, with individual arrangements and adaptations implemented when necessary.

### ***Learning environment***

The localities of HEPMA facilitates informal interaction between students and staff, with students, staff, administration and many lectures placed on the same floor. This should provide for a good study environment and much closer contact with staff than is common in many other

universities. However, the interviews with students indicate that the student milieu is not as good and social as one would assume, at least when measured as student presence in the HEPMA facilities. According to our informants, at any typical pre corona-day there used to be a group of only 5-6 students on campus, which seems rather low. One possible explanation offered in the interviews is that most Norwegian students have a part-time job and are therefore present mostly at lectures.

It is furthermore maintained in the interviews that the broad competence and cultural background of mainly ambitious students is a great strength of the program. Yet, there seems to be the impression that this could be utilised better: while the varied country background of students is well incorporated in the management specialisation, it is less so in the economic courses. Then again, this is probably partly due to the nature of the courses, with economy being more theoretical and management leaving more room for discussions and sharing of experiences.

While it is difficult to come up with recommendations on how to increase student presence at campus, one possible measure would be to improve reading- and computer facilities, which was also pointed out in the 2015 evaluation. Other measures to increase the sense of program belonging and campus presence could be to initiate more informal social activities, combining external lectures and social activities such as for instance quiz, movie nights, food, etc.

### ***Student satisfaction***

According to the 2020 internal evaluation, both the survey responses and meetings with the student representatives indicate an overall high level of student satisfaction with the courses and with HEPMA. One concern raised in the 2019 evaluation was a high overlap between the specialisations. As noted in the internal evaluation, however, this is difficult to mitigate without increasing the number of courses and thereby the workload of the staff. Given that the main concern of this evaluation panel is the staff workload, and assuming no increases in resources, we naturally advise against increasing the number of courses.

A second concern has evolved around uneven workloads per ECTS between courses. This has been, or is in the process of being handled, by merging more courses into 10 ECTS courses. However, our impression from the student interviews is that it still remains a problem. The general view among students seems to be that 10 ECTS courses are preferred over 5 ECTS

courses, since the workload is about the same anyway. Moreover, the student interviews also indicate that students favour fewer courses to get a deeper understanding in addition to the broader view. The student feedback also indicates that the introductory courses in the first semester is experienced as particularly intense, given the many 5 ECTS courses with high workloads.

A third issue raised by students in evaluations since 2015 is that economic evaluation is a specialisation with high demands. The 2020 internal report thus raises the question whether the requirements are higher for students who choose this specialisation compared to the other specialisations. Our interviews with staff suggest that it is not the requirements in itself that are higher, but rather the investments of time and work that are needed. This is due to the nature of economic evaluation: the course covers both theoretical and practical aspects of evaluation, and students may be required to take part in instructions and seminars, and submitting assignments throughout a course. All of which will direct students' allocation of time and effort.

A fourth recurring issue have been that students struggle due to poor background in statistics and economics. To mitigate this problem, the department has offered more seminars and hired a former student to run seminars. The department is also considering offering a pre-course in statistics. The evaluation panel views this as a challenge that may seem difficult to get around, all the time that the program caters to such a broad and varied selection of students with backgrounds from economics/administration/management, health science, social science and public health. It seems that the department has already taken the measures that are available without having to increase the staff workload.

There have also been complaints that the elective courses offered does not correspond to the elective courses listed on the website at the time of application. This has caused difficulties with long-term planning of the course of study. A related matter brought up in student evaluations is the narrow selection of complementary courses for students on the management track. This impression is also confirmed by the student interviews. The lack of complementary courses to choose from means that the courses sometimes does not add up, which have made some management students switch to the general specialisation instead.

Finally, the evaluation panel is a bit surprised to learn about the strict regulations for re-sit examinations. Our experience is that it is common to allow for re-sit examinations the following

semester in most studies, but HEPMA students have to wait a full year to do it. This was brought up in the student interviews as adding extra pressure of performing well on the exams, and may also possibly affect negatively on student continuity, since re-studying for an exam becomes more challenging the longer the time has passed.

### ***Resources/infrastructure***

This evaluation panel's main concern is the staff workload. HEPMA has over many years struggled with a challenging resource situation, which can perhaps be described as a result of path dependency. Since HELED's reorganisation from own Institute into a department within the Institute of Health and Society, it has received comparatively less resources than the other departments within the Institute of Health and Society. This has naturally also affected HEPMA, which has had less funding than other programs at the institute. The 2015 periodic program evaluation noted that "both the internal evaluation report and the interviews with academic staff reveal worries that the teaching burden is too high, not only in absolute terms, but also to comparable departments at the Medical Faculty and the University of Oslo". Later, the 2020 internal report highlighted lack of resources and a high workload for the staff as the most important challenge for HEPMA.

The tight resource situation has made HEPMA dependent on temporary/hired staff in order to continue to offer its broad and varied course portfolio, and the coordination of this has demanded much extra time and resources from the regular staff in addition to their already high teaching- and supervision workload. The high workload is a concern within all three specialisations but seems particularly critical for the specialisation in economic evaluation: while this is by far the most popular specialisation with most students, there is a limited number of staff that can supervise those writing their master's thesis in evaluation. The management specialisation has reportedly also faced some of the same challenges, although the pressure on supervision capacity has gone more in waves here.

Several efforts have been made to reduce the overall workload for the staff, such as merging some 5 credits courses into 10 credits and making one of those courses common across all specialisations (HFIN4210). HELED is furthermore planning to use more PhDs in both teaching and supervision, but the effects of this remains to be seen. Several staff members have also introduced more group-supervision, but the internal report emphasises that the burden on the staff – both in terms of teaching and supervision – is still high and increasing. This

impression is also confirmed in the interviews with staff and by the panel members' own knowledge and experience with HEPMA.

The evaluation panel is thus concerned that the staff workload still remains the most important challenge, five years after the last periodic evaluation. While the interviews leave a clear impression of a unique and highly revered work environment, with great pride of the common effort to keep things going, there is an increasing weariness with the workload of HEPMA and a strong sense that the “dugnad” has lasted too long. We strongly recommend that this issue is quickly solved, to avoid possible burnout and turnover among the staff. The dilemma of HEPMA, as formulated by the internal evaluation, is that the program needs to offer a sufficiently wide range of relevant courses within each specialisation to ensure high interest among stakeholders, while lack of resources and an increased staff workload speaks against this. Unless there is a significant increase in resources, there seems to be no way around reducing and merging courses. The upside of this is that increasing the number of 10 credits courses will provide students with more in-depth knowledge. As mentioned, the feedback from the student interviews also suggest that they prefer more 10 credits courses and fewer 5 credits courses.

The 2015 evaluation panel recommended that the teaching burden is monitored closely at individual level, and that measures are taken to protect the research time for teachers. One obvious step towards this would be to introduce formal “teaching accounting” for the staff. This is quite common at most academic institutions as it makes it easy to keep track of the teaching workload, and it is somewhat surprising to learn that it has not been implemented for HEPMA. Given that the interviews with the staff suggests that it is the tutoring and not teaching that is the main burden, it is important that the teaching accounting also register tutoring in addition to teaching. The tutoring burden is particularly a strong burden in the evaluation specialisation, with reportedly as much as 7-10 master students per staff. On top of this, the staff also receives many external inquiries, such as from the pharmacy industry. Obviously, turning down such projects is not a solution, since they provide interesting research possibilities as well as funding for PhD candidates. Using the projects to “buy out” of teaching and tutoring has also not been an option, given the current staff resource situation. Another obvious alternative could be to link up closer with industry, business and other external actors, incorporating them as co-tutors. The experience so far, however, is that the department staff ends up taking on most of the responsibility, with the external actors contributing little. Also, students have not been very



positive towards writing their theses based on common research topics with group tutoring. Another way of making the tutoring burden more manageable would of course be to use additional salary (“B-tillegg”).

The recommendation from the 2015 program evaluation was to offer more joint courses for all three specialisations in order to reduce the overall workload for the academic staff and to create an even more structured progression within each specialization. However, looking at the course-structure for 2019-2021 we would like to raise the question of whether the measures taken maybe have been too “harsh”: what is now the *uniqueness* of the different specialisations? This is also addressed in the internal evaluation in that they write: “... the high overlap between the specializations is a potential problem” (p15). Based on the different subjects included in the portfolio of the different specialisations, there seems to be a potential to improve the “uniqueness” of the specialisations. Today, students may choose from a number of elective courses but of which very few is “tailored” for the individual specialisation.

In conclusion therefore, we are unable to see other feasible solutions to the high workload than hiring more staff and/or reducing the number of students. According to our feedback there seems to be a general agreement that two man-labour years – one in evaluation and one in management – is what is needed to improve the situation. Unless nothing is done, we are concerned that the high workload may affect the usual academic qualification track for the department staff. There have, reportedly, been several occasions where sabbatical leaves have been denied because of lacking personnel. With an unchanging high workload, the department risks ending up with many associate professors who work hard teaching and tutoring, but with little prospects of qualifying for promotion. This might eventually lead to members of the staff starting to look for other positions.

### ***Recommendations***

The HEPMA program has undergone several changes since its establishment in 2005. Overall, the department seems to have been as responsive as possible towards the suggestions and issues brought up by previous evaluation panels and by the students. Particularly the changes implemented in the period 2009-14 have been quite comprehensive and have undoubtedly improved the program in significant ways. The question is whether these changes have come at too high a cost, in terms of the increasing workload for the staff. There is no doubt that HEPMA is still the most well developed and largest of its kind in Norway and has every potential to

continue to be. The wave of health reforms finding place in many countries will only increase the need for economic-administrative skills in state and local public administration, health enterprises, pharmacy industry and other organisations in the healthcare sector, both nationally and internationally. While HEPMA still holds a unique position nationally, especially within the specialization in Economic Evaluation, there are several educational institutions offering master studies within health care management, health policy as well as studies adjacent to that of health economics. Hence, if the HEPMA program aims to offer a competitive and unique specialization within Health management and Health policy, then more resources should be targeted these specializations, and / or consider collaboration with relevant national institutions.

*Table 1: Summary of main findings, possible consequences and suggestions for measures.*

<b>Findings</b>	<b>Possible consequences</b>	<b>Suggestions for measures</b>
The program still <b>lacks a sufficiently clearly formulated objective and learning outcome aim</b> . The interviews of the faculty members indicate that they have a shared understanding of how the program will educate candidates with a competence that is needed in Norwegian healthcare. In order to do so the candidates become introduced to several topics and streams of research, as indicated in the name of the program. There is however an <b>imbalance between the three specialisations</b> with too much emphasis on economic evaluation on behalf of the other specialisations (see more comments below on each of the specializations).	The name of the program gives both students that consider applying to the program and those that attend the program, expectations about what will be covered and in what way this program is different from similar programs elsewhere, in Norway and abroad. Students that participate in the program may become disappointed when they discover that there is a clear imbalance between the different specialisations. This may again lead to potential turnover intention and negative reputation in the market.	Formulate a clear goal/aim for the program and communicate that clearly on the webpage. Consider revising the name of the program so that it better reflects what the content.
Too high emphasis/priority of the economic part of the program.	Downgrading of the management component of the programme.	Initiate principal discussion of the future role of the management component of the programme.
Lack of policy component in the health economics and policy specialisation.	Challenging to recruit and retain more political science students with such a limited content of health policy component.	Either incorporate more policy in the health economics and policy specialisation or remove the word 'policy' altogether from the course description.

<p>The healthcare management specialization gives a relatively good overview of important topics in this domain. However, the link between the different courses is somewhat under-developed, and the specializations provides less flexibility in terms of which courses that the students can follow.</p> <p>There are too many and probably too ambitious learning outcomes both for the specialisation and in some of the courses.</p> <p>Several relevant healthcare management journals (see page 15) and topics are to a limited extent represented.</p>	<p>A possible under-developed link between the different courses makes it more difficult for the students to develop a good overview of the field. Lack of flexibility in terms of courses to choose from can potentially have several negative effects: 1. Increased turnover (students choose to take the general option instead) and fewer students in the courses, 2. it may lead to slower progress.</p> <p>Lack of clearly defined and realistic learning outcomes make it more challenging for both teacher and students what to focus on and can also give unrealistic expectations to what they will learn.</p> <p>Students do not become familiar with important research representing the international research frontier.</p>	<p>Carefully consider the links between the different courses in terms of topics covered, teaching forms and evaluation. On that basis see which changes can potentially made.</p> <p>Evaluate the defined learning outcomes for the program and in the different courses. Revise to ensure that the constructive alignment becomes strengthened.</p> <p>Consider including articles from a broader range of internationally leading journals that publish healthcare management research.</p>
<p>High faculty workload, particularly when it comes to tutoring in the evaluation specialisation.</p>	<p>Burnout, turnover.</p>	<ul style="list-style-type: none"> <li>- Hire more staff: two man-labour years in management and evaluation.</li> <li>- Introduce a system for “teaching/tutoring accounting”</li> <li>- Re-introduce more 10 credits courses</li> <li>- Reduce the number of students</li> </ul>
<p>Too strict regulations for re-sit examinations.</p>	<p>May affect negatively on completion rates.</p>	<p>Allow for re-sit examinations the following semester.</p>
<p>The link between learning outcomes, teaching and evaluation (constructive alignment) is for the most part good. However, some of the courses have too many learning outcomes and it is not sufficiently clear for the students how they will be evaluated.</p>	<p>Students may have unrealistic expectations about what they will learn and overconfidence in their own abilities about their abilities in certain areas in which long period of practice is necessary to become competent.</p> <p>It may be too unclear how they will be evaluated, which may lead to stress and frustrations that are negative for their learning.</p>	<p>Carefully read through the defined learning outcomes, and revise them both in terms of number of objectives and in terms of level of ambition. Communicate more clearly to the students what they can expect to learn, and ensure to have teaching and evaluation form that are well aligned</p>
<p>Poor student environment/little student presence at campus.</p>	<p>Lack of sense of program belonging.</p>	<ul style="list-style-type: none"> <li>- Improve reading- and computer facilities</li> </ul>

		- Initiate informal social activities for students, for instance in combination with external lectures
Distance between teaching and the practice field.	Students miss out on practical insights/skills/experience.	<ul style="list-style-type: none"> <li>- Increase the share of guest lecturers.</li> <li>- Excursions to relevant healthcare institutions.</li> </ul>