Report - SG1102 - 2019-04-02

Respondents: 1
Answer Count: 1
Answer Frequency: 100.00 %

Please note that there is only one respondent to this form: the person that performs the course analysis.

Course analysis carried out by (name, e-mail):

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COURSE DESIGN
Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering.

Föreläsningar
15 x 2h
Föreläsningarna i kursen är organiserade enligt undervisningsmetoden Peer Instruction (kamratlärande på svenska).
- It has been emphasized to the students the importance of reading the course material prior to the lecture. The sections in the book recommended to be read by the students are specified in the course program. The peer-instruction based lectures were complemented with an overview on the theory to refresh the information already read by the students prior to the lectures. Moreover, concrete examples were given and problems/exercises were resolved in the classroom. Lecture notes were provided on the course's website. Particular exercises from the course book were suggested as homework to the students for complementing the course material discussed in the class-room.
Expected students' workload level: 160 hours over 9 weeks (15-17 hours of studying/week)
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Övningar
7 x 2h
Rekommenderade strategi: Inför övningarna så delas hela klassen in i två övningsgrupper. Övningarna leds av en övningsledare. Övningsledaren inleder oftast övningen med att räkna igenom en uppgift vid tavlan så att studenterna blir bekanta med hur man kan lösa en uppgift. Resten av övningen så sitter studenterna och löser rekommenderade uppgifter enskilt eller i grupp och två-tre personer. Övningsledaren går då runt i övningssalen och hjälper studenter med att lösa uppgifterna.
Vid övningarna tränar studenterna att på egen hand lösa uppgifter av den typen som kommer på problemdelen på tentamen. Ett aktivt deltagande på övningarna ökar därmed chanserna att klara problemdelen.
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- Change from the last course offering.
Attention has been paid to cover into more detail and with examples the basic concepts "Equilibrium/Jämvikt" and "Free-body-diagram /Friläggning".
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Examination: Inlämningsuppgifter (INL1 & INL2, 1.5 hp)
Dessa är obligatoriska och godkända inlämningsuppgifter ger 1,5 kurspoäng.
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Examination: Teoritentamen/ 2 Kontrollskrivningar KS1 & KS2 (TENB, 1.5 hp)
Sluttentamen består av två delar: en ”teoridel” (TENB) och en ”problemdel” (TENC). ”Teoridelen” examinerar studenternas konceptuella förståelse av mekanik och kan examineras innan sluttentamen genom kontrollskrivningar (KS:ar). Även om studenten har klarat ”teoridelen” på tentamen genom KS:arna så har studenten rätt att skriva den delen på sluttentamen för att kunna förbättra sitt resultat. Det gynnsammaste resultatet är det som räknas för slutbetyget.
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Examination: Tentamen (TENC, 3.0 hp)
Sluttentamen innehåller en problemdel där studentens förmåga att individuellt lösa mekanikproblem examineras.

THE STUDENT'S WORKLOAD
Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If there is a significant deviation from the expected, what can be the reason?

SG1102 kurs, 6 hp
Expected students' workload level: 160 hours over 9 weeks (15-17 hours of studying/week)
Antal respondenter: 84
Antal svar: 26
Svarsfrekvens: 30,95 % (about 4% increase as compared with VT2018)

49.9% of the students participating in the poll worked more than 12 hours per week (among which 30.7% work more than 15 hours/week)
23.1% of them worked 9-11 hours/week
23.1% of them worked 6-8 hours/week
3.8% worked bellow 5 hours/week

18-23 hours/week

VT17 / VT18 /VT19
20.0% / 7.4% / 11.5%

15-17 hours/week

VT17 / VT18 / VT19
11.4% / 11.1% / 19.2%

12-14 hours/week

VT17 / VT18 / VT19
11,4% / 7.4% / 19.2%

9-11 hours /week

VT17 / VT18 / VT19
20,0% / 40.7% / 23.1%

6-8 hours /week

VT17 / VT18 / VT19
14,3% / 22.2% / 23.1%

bellow 5 hours /week

VT17 / VT18 / VT19
14,3% / 11.1% / 3.8%

30.7% of students dedicated more than 15 hours/week for study during VT19.
The number of students that dedicated more than 9 hours/week has increased to 70.3% (66.6% during VT18 and 62.8% during VT17).
Only 3.8% of students studied less than 5 hours/week during VT19, a significant reduced number as compared with the previous years (11.3% during VT18 and 14.3% during VT17).
The previous experience with this course has been properly used to find the right balance between the theory given, the peer-instruction questions, and the exercise/problems sessions.

THE STUDENTS' RESULTS

How well have the students succeeded on the course? If there are significant differences compared to previous course offerings, what can be the reason?

Grade distribution A-E (only first-time registered students, 67 students out of 84, VT2019):

Grade distribution [%, number]

A 3% (2)
B 38% (26)
C 25.5% (17)
D 22.3% (15)
E 10.4% (7)

79.7% of first-time registered students VT19 had grades between (A-E) and passed the course after the first examination (80.7% during VT18).

OVERALL IMPRESSION OF THE LEARNING ENVIRONMENT

What is your overall impression of the learning environment in the polar diagrams, for example in terms of the students' experience of meaningfulness, comprehensibility and manageability? If there are significant differences between different groups of students, what can be the reason?

The overall impression in terms of students' experience of meaningfulness is that they were working with interesting issues and that they explored parts of the subjects on their own. Thus, they were active outside of the class room (spending time on task). They found the course challenging in a stimulating way. 92% of participating students felt togetherness with the other colleagues, often working in groups outside of the class room scheduled activities. The atmosphere on the course was open and inclusive.

With respect to the overall impression in terms of students' experience of comprehensibility, the students felt that the intended learning outcomes (ILOs) helped them to understand what they are expected to achieve and that the course was organized in a way that supported their learning. They were able to learn from concrete examples that they could relate to and they felt that understanding of key concepts had high priority. Most of them felt that the course activities helped them to achieve the ILOs efficiently and they understood what has been expected to learn in order to obtain a certain grade. The students felt that they could practice and receive feedback without being graded and that the assessment on the course was fair and honest.

Concerning the overall impression in terms of students' experience of manageability (background knowledge, participation, collaboration), the students felt that their background knowledge was sufficient to follow the course. They considered that the course activities enabled them to learn in different ways. Most important, they were able to learn by collaborating and discussing with their peers, thanks to the peer-instruction based lectures. 96% of students participating in the course evaluation considered that they were able to learn by collaborating and discussing with others. Most of them regularly spent time to reflect on what they learned.

ANALYSIS OF THE LEARNING ENVIRONMENT

Can you identify some stronger or weaker areas of the learning environment in the polar diagram - or in the response to each statement - respectively? Do they have an explanation?

Strongest areas:

- The students are working with interesting issues
- They explored parts of the subjects on their own at home and they felt togetherness with the other colleagues.
- They were able to learn from concrete examples that they could relate to.
- They felt that understanding of key concepts had high priority.
- They understood what they were expected to learn in order to obtain a certain grade.
- They could practice and receive feedback without being graded thanks to the peer-instruction questions and problems analysed during the lectures and exercise sessions.
- The atmosphere on the course was open and inclusive.
- The assessment on the course was fair and honest.
- Their background knowledge was sufficient to follow the course.
- The course activities enabled them to learn in different ways.
- The students were able to learn by collaborating and discussing with their peers.

Weaker areas:

- Not all students felt that they were able to learn by trying out their own ideas. Also, most of them considered that they didn't had opportunities to influence the course activities. However, 65.4% of them considered that the course activities enabled them to learn in different ways. The course activities are designed before the course starts based on the previous teachers' experience and feedback received using previous course evaluations, as well as that received during the organized meetings with the student representatives and the Program responsible (PA), one before the course starts and the other during the period in which the course is given.

ANSWERS TO OPEN QUESTIONS

What emerges in the students' answers to the open questions? Is there any good advice to future course participants that you want to pass on?

Bellow are a few answers from the students to the open questions:

What was the best aspect of the course?

- Kombinationen med föreläsningar och övningar. Inlämningsuppgifterna gav en väldigt bra grund för problemlösning, och den feedback man fick
till baka var till stor hjälp.
- Att man erbjöds delprov under kursens gång samt inlämngsuppgifter vilket innebar att man kunde klara av högskolepoäng och delar av kursen

under kursens gång och få större möjligheter att klara kursen. Peer-instructionfrågorna var ett bra inslag i föreläsningarna och bra sätt att få interaktiva föreläsningar.
- Peer instructions frågorna
- Att Mihai vad jag hört behandlade Funka-studenter bra och med förståelse.
- Att det fanns tidigare material att utgå från inför tentor och kontrollskrivningar.
- Clickers frågorna.
- Att det var många små delmoment och inte bara en stor tenta. Det kändes tydligt varje vecka vilka uppgifter man förväntades göra.
- Mihai är en otroligt bra lärare tycker jag. Jag har ADHD och behöver ibland kämpa för att hålla fokus, men peer-instruction frågorna var superbra för detta!
- Trevlig atmosfär.
- Kul med Peer instruktion!
- Kursen var väl strukturerad och föreläsaren var engagerad och kunde ämnet väl. Man lärde sig mycket av peer-instruction frågorna och fick regelbunden feedback.
- Genom kontrollskrivningarna kunde man skrapa ihop lite poäng till tentan.
- Mycket problemlösning, inlämningsuppgifterna, bra tenta, peer learning (gillar konceptet men var själv inte där så vet inte hur det funkade i praktiken).
- Att det fanns många möjligheter att klara kursen, en bra blandning av tenta, KS och inlämningsuppgifter, peers-frågor och övningar.
- Peer instruction frågorna var ett roligt nytt sätt att lära sig på.

What advice would you like to give to future course participants?

- Lägg ner mycket tid!
- Gör många uppgifter och tänk hela tiden på att förstå teorin.
- Häng med så blir det kul!
- Plugga kontinuerligt!
- Lägg inte för mycket fokus på att försöka förstå innan du löser uppgifterna utan gör dom istället om och om igen tills du förstår.
- Plugga kontinuerligt, gör uppgifter själv, skriv inte bara av någon, och se till att du förstår dem.
- Läs innan! Det gjorde föreläsningarna roligare och enklare. Räkna mycket uppgifter under hela kursens gång. Det var trögt i början för mig, men lossnade efter ett tag. Gå på övningar och ställ mycket frågor!
- Läs mycket på egen hand. Gå på alla övningar.
- Klara KSen så får du extra tid (som behövs!) till problemdelen av tentan.

- Kom väl förberedd, räkna många tal, diskutera med klasskompisar.
- Börja räkna övningar direkt! Och sammanfatta föreläsningarna själv varje vecka, i ett formelblad t.ex. underlättar under tentaperioden!

PRIORITY COURSE DEVELOPMENT

What aspects of the course should primarily be developed? How could these aspects be developed in the short or long term?

- More attention will be given when integrating the theory exposed in the book with the peer-instruction questions and with the problem based examples.
- It is considered to use CANVAS platform for implementing tests based on multiple-choice questions that students can access and resolve prior to lectures.

OTHER INFORMATION

Is there anything else you would like to add?

"Det var mycket roligare med mekanik än vad jag trodde! :)" student, SG1102 Mekanik, Mindre Kurs, VT2019

"Härligt med en så engagerad och kunnig lärare! (Mihai) Ibland var det dock svår att förstå vissa koncept även om jag frågade på rasten. Det hade varit bra med förklaringar med andra ord." student, SG1102 Mekanik, Mindre Kurs, VT2019

"Kändes verkligen som att föreläsaren ville att man skulle förstå och klara kursen! Uppskattades enormt!" student, SG1102 Mekanik, Mindre Kurs, VT2019