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| **2023/2024. academic year** **program of study**  |
| **Full (Hun) name of the subject: FARMAKOÖKONÓMIA** |
| **Program: Undivided program (pharmaceutical)** |
| **Schedule: full time** |
| **Short name of the subject:**  |
| **English name of the subject: Pharmacoeconomics (practice)** |
| **German name of the subject: Pharmakoökonomie** |
| **Type of registration: obligatory/obligatory elective/elective/criteria requirement** |
| **Neptun code of the subject:** GYKETE131G1A |
| **Responsibnle Department:** Center for Health Technology Assessment |
| **Responsible tutor: Assoc.** Prof. András Inotai**Contact information:** **- phone:** 06/70 430-46-45 **- email:** inotai.andras@semmelweis.hu | **Title, academic degree:**Assoc Prof.; Ph.D., DrHabil |
| **Name of the persons responsible for the teaching of the subject:**Prof. Zoltán KalóAssoc. Prof. Balázs NagyZsuzsanna Petykó | **Title, academic degree:**PhD, DrHabilPhD, DrHabilPhD candidate |
| **Class per week:** 1x45 min (2x45 mins bi-weekly, 1x45 lecture followed by 1x45 practice)  | **Credit point(s): 1** |
| **Professional content, intent of acquirement and it’s function in order to implement the goals of the program:** Health technology assessment (HTA)is the evaluation ofhealth technologies (including pharmaceuticals) from different perspectives (incl. clinical, economic, organizational, ethical etc.) to support health policy decision making at institutional-, and macro (i.e national) level. Practice-oriented teaching of basic health- and pharmacoeconomic knowledge for students enables them interpreting and determining the cost-effectiveness of health technologies (including pharmaceuticals), and understanding the principles of pharmaceutical pricing and reimbursement.Competencies acquired through the completion of the course: Command of key health economic terms, including: health technology assessment (HTA), steps of economic evaluations, measurement of health outcomes incl. health related quality of life, measurement of costs, pricing and reimbursement of pharmaceuticals, pharmaceutical policy |
| **Short description of the subject:** Practice-oriented teaching of basic health- and pharmacoeconomic knowledge for students to enable them interpreting and determining the cost-effectiveness of pharmaceuticals, and understanding the principles of pharmaceutical pricing and reimbursement. |
| ***Course data*** |
| **Recommended term** | **Contact hours (lecture)** | **Contact hours (practice)**  | **Contact hours (seminar)** | **Individual lectures** | **Total number of contact hours/semester** | **Normal course offer** | **Consultations** |
| From 7th semester | 7 | 7 | 0 | 0 | 14 | Autumn semester\* Spring semesterBoth semesters*(\* Please underline)* | 7 (bi-weekly 1x45 min lecture followed by 1x45 min practice: total 90 mins) |
| ***Program of semester\*\**** |
| **Topics of theoretical classes (pro biweek):**

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| Class | Topic | Lecturer |
| Week 145 min | Health care market and market failuresElements of health care systemFinancing health care | Zoltán Kaló |
| Week 345 min | Pharmacoeconomics, Health Technology Assessment, Classification of economic evaluations | Zoltán Kaló |
| Week 545 min | Steps of health economic evaluation I - Evidence synthesis, health outcome measurement (quality of life, utility, quality adjusted life years) | Zsuzsanna Petykó, András Inotai |
| Week 745 min | Steps of health economic evaluation II – Measuring costs, decision rule (threshold, multicriteria decision analysis) | Balázs Nagy |
| Week 945 min | Health economic modelling (classification, applicability) | Balázs Nagy |
| Week 1145 min | Pricing of original and generic medicines | András Inotai |
| Week 1345 min | Pharmaceutical reimbursement system, cost control techniques | András Inotai |
| EvaluationWeek 14 | Test type exam |  |

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| **Topics of practical classes (pro biweek):**

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| Class | Topic | Lecturer |
| Week 145 min | Health care market and market failuresElements of health care systemFinancing health care | Zoltán Kaló |
| Week 345 min | Pharmacoeconomics, Health Technology Assessment, Classification of economic evaluations | Zoltán Kaló |
| Week 545 min | Steps of health economic evaluation I - Evidence synthesis, health outcome measurement (quality of life, utility, quality adjusted life years) | Zsuzsanna Petykó, András Inotai |
| Week 745 min | Steps of health economic evaluation II – Measuring costs, decision rule (threshold, multicriteria decision analysis) | Balázs Nagy |
| Week 945 min | Health economic modelling (classification, applicability) | Balázs Nagy |
| Week 1145 min | Pricing of original and generic medicines | András Inotai |
| Week 1345 min | Pharmaceutical reimbursement system, cost control techniques | András Inotai |
| EvaluationWeek 14 | Test type exam |  |

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| **Schedule of consultations:** 90 mins bi-weekly (contact hours, 1x45 min lecture followed by 1x45 min practice) |
| ***Course requirements*** |
| **Prerequisites:** Pharmacology and Toxicology I.Statistics for PharmacistsBasics of Economics |
| **Conditions of attending the classes, amount of acceptable absents, way of presentation of leave, opportunity for makeup:** Regular attendance is strongly recommended; however, it is not mandatory for semester acceptance. No attendance sheet will be used. Audio recordings of the classes will be available throughout the semester and will be shared on Moodle for students to make up for absences. No need to justify absence. |
| **Number, topics and dates of tests during the semester, opportunities of makeup and improvement of results\*\*\*:** NA |
| **Requirements of signature:** No further requirement is applicable for the signature |
| **Number and type of projects students have to perform independently during the semester and their deadlines:** NA |
| **Type of the semester-end examination:** signature\*/practical grade\*/semi-fnal\*/final\* *(\* Please underline)***Examination requirements:** as published by the education-research department on the MOODLE interface by the start of the academic term. Test-type written (Moodle based) classroom exam of the entire semester curricula at week 14 (according to semester schedule), opportunity for correction: week 1 of exam period. Exam schedule to be disclosed during the first contact class. Duration 45 mins/40 test type questions incl. true/false, simple choice, multiple correct answer quiz question. Min. 40% is required to pass. Detailed technical information and test tutorial will be shared on Moodle. |
| **Form of the semester-end examination*:*** written\*/oral\*/combinated examination\* *(\* Please underline)* Test-type written (Moodle based) classroom exam of the entire semester curricula at week 14 (according to semester schedule), opportunity for correction: week 1 of exam period. Exam schedule to be disclosed during the first contact class. Duration 45 mins/40 test type questions incl. true/false, simple choice, multiple correct answer quiz question. Min. 40% is required to pass. Detailed technical information and test tutorial will be shared on Moodle.

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| *Test result (%)* | *Pharmacy students (compulsory)* | *Medical students* *(elective)* |
| *85-100* | *5 (excellent)* | *Distinction* |
| *70-84.99* | *4 (good)* | *Distinction* |
| *55-69.99* | *3 (average)* | *Merit* |
| *40-54.99* | *2 (satisfactory)* | *Merit* |
| *0-39.99* | *1 (unsatisfactory)* | *Fail* |

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| **The possibility and conditions for offering grades:** NA |
| **List of teaching materials:** slide decks and audio recordings of the classes (available throughout the semester), compulsory and recommended reading materials, test tutorial for the entire semester curricula. All materials are uploaded to Moodle and assigned to be-weekly classes. |
| **Scientific, course related researches, publications, assays:** NA |
| **In the case of a subject lasting more than one semester, the position of the teaching/research department on the possibility of parallel enrolment and the conditions for admission\*\*\*\*:**yes\*/no\*/on and individual assesment basis\* *(\* Please underline)* |
| **The course description was prepared by:** András Inotai |

***\*\* A tantárgy tematikáját oly módon kell meghatározni, hogy az lehetővé tegye más intézményben a kreditelismerési döntéshozatalt, tartalmazza a megszerzendő ismeretek, elsajátítandó alkalmazási (rész)készségek, (rész)kompetenciák és attitűdök leírását, reflektálva a szak képzési és kimeneti követelményeire.***

***\*\*\* A tantárgyi programban kell meghatározni azt, hogy a félévközi teljesítményértékelések eredménye hogyan befolyásolja a félévközi érdemjegy (gyakorlati jegy), a vizsgaérdemjegy megállapítását és a jegymegajánlást. A
teljesítményértékelés módját, tartalmi elemeit megfelelő részletességgel fel kell tüntetni a tantárgy követelményrendszerében (tantárgyi programban). A vizsgajeggyel záruló tárgy esetén a félévközi teljesítmény-értékelés: a) nem lehet az aláírás feltétele, de a jól vagy rosszul teljesítőknél kedvezmény vagy többletfeladat megadását vonhatja maga után, b) eredményéhez a tantárgyi programban (tantárgyi követelményrendszerben) meghatározott vizsgakedvezmény vagy többletfeladat társulhat, ilyen vizsgakedvezmény lehet például gyakorlati vizsga, beugró alóli mentesség, bizonyos vizsgarész teljesítése alóli felmentés; többletfeladat lehet például több tétel húzása és teljesítése a vizsgán, c) a tantárgyi programban (tantárgyi követelményrendszerben) részletezni kell az egyes félévközi teljesítmények eredményeihez társított kedvezmény vagy többletfeladat mibenlétét, valamint azt, hogy azok milyen módon és arányban kerülnek figyelembe vételre a vizsgán.***

***\*\*\*\* Pontosan jelölni kell, mely részük ismerete melyik követelmény elsajátításához szükséges (pl. tételenkénti bontásban).***