

Study instructions

Demands

- Active attendance at the classes – **one unexcused absence** possible, excuses give in to the study office
- Possibility of substituting your classes in other seminar group (has to be the same week as your absence, max. twice a semester)
- Taking **two partial exams** (in the case of successful completion over 70 %, you get bonus 5 % for your final exam)
- Regular **homestudy** required
-

Methods of teaching

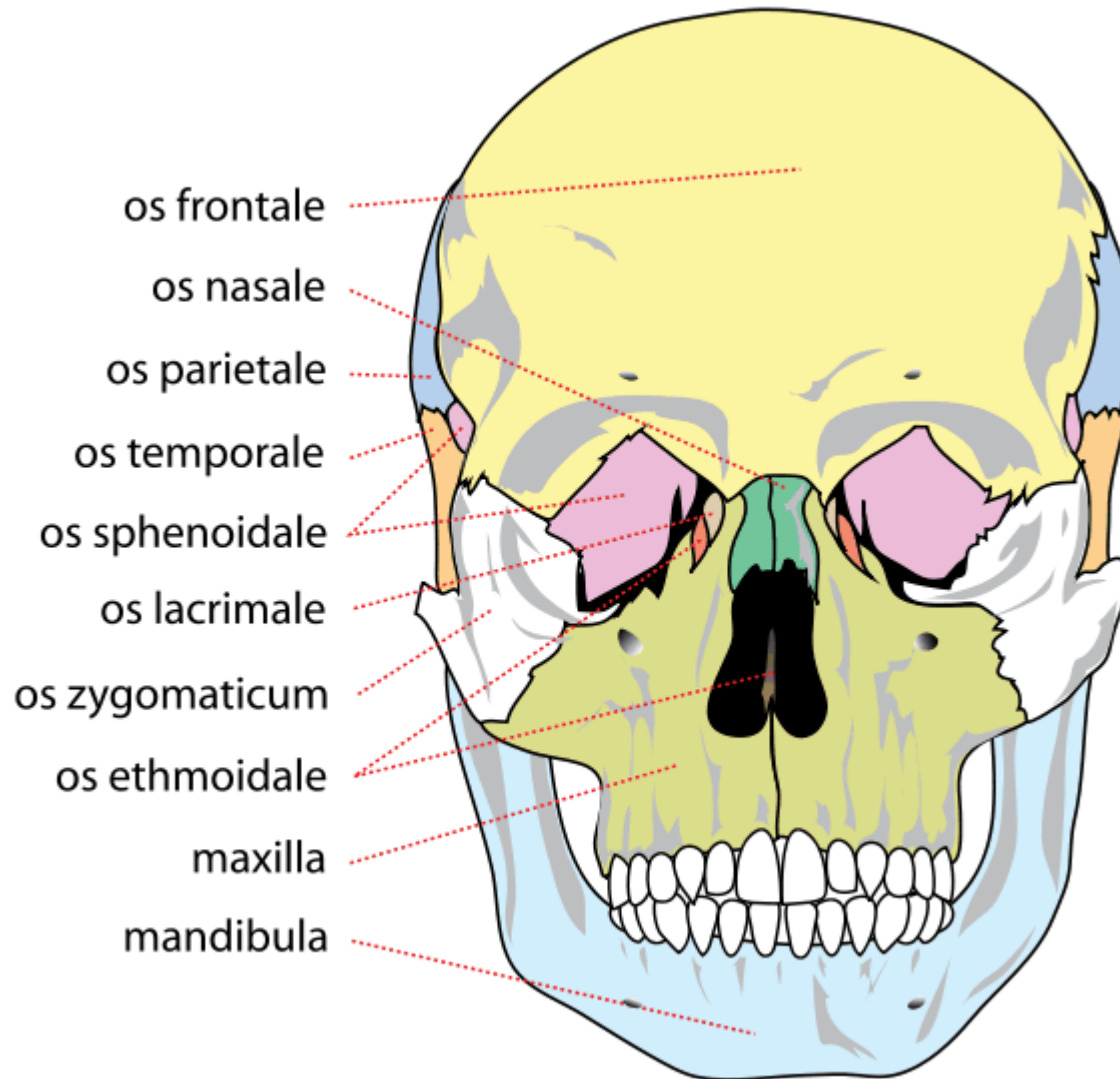
- Preparatory course
- 7 units in one semester – exercises in the handbook (Prucklová, Severová – Introduction to Latin and Greek Terminology in Medicine)
- Study materials under your personal administration in IS
- Drill in the IS
- Study literature (illustrated dictionaries)



Why Latin/Greek?

- universal, precise and flexible system of terms
- Denote:
 - anatomical structures
 - medicaments
 - therapeutical methods, diagnoses
- Used in:
 - clinical diagnoses
 - dissection protocols
 - medical prescriptions
 - medical documentation --- communication between doctors from different environments/countries/fields of study

Anatomical structures



Medicaments

- Paxil: an antidepressant and anti-anxiety drug (Pax=peace in Latin)
- Lunesta: a sleeping medication (Luna=moon in Latin)
- Viagra: a medication for erectile dysfunction (Vi[r]=man in Latin and Agra=field, usually farmed or fertile in Latin and Greek)
- Fosamax: a drug for osteoporosis, or bone thinning (Os=bone Max=great in Latin)

Diagnoses



Rehabilitační oddělení
B Rehabilitace odd 186A (B-RHO-A)
Fyzioterapie 625 00 Brno rázičko oddělení
IČP: 72100054 ①

RHO-1A
Fakultní nemocnice Brno
rehabilitační oddělení
Jihlavská 20, 625 00 Brno
⑤

Č. chor

Zákl. dg: M160 Coxarthrosis l. sin.

Dg. souhrn:

St.p. implantationem endoprotheseos totalis coxae l.sin. propter
coxarthrosim 13.10.2010 Z 96 6

Coxarthrtosis l.dx. I st. M 16 0

Morbus hypertonicus in anamnesi h.t.comp. I 10

Léčebný a diagnostický plán:

LTV - 2 x denně - cvičební jednotka pro pac. po TEP kyčle, kondi
cvičení dle tolerance pac., dechová a cévní gymnastika, nácvik ch
po rovině a po schodech o 2 PB bez zatěžování operované LDK~~4~~ s její
příkládáním.

Goniometrie kyčle 1x týdně. MT na jizvu - po vytažení
stehů denně - od 1.11.2010

Nácvik samostatnosti a soběstačnosti.

PIR - protažení flexorů kyčlí i kolenních kloubů, resp.
protážení zkrácených svalových skupin a posílení oslabených
svalových skupin.

Poučení pacienta o péči o jizvu, instruktáž pacienta.

20.10.2010

System of diagnose codes

Dg: T068 Polytrauma

W1731 Pád s padákem

S4220 Fractura humeri proximalis l. sin comminutiva luxans

S3250 Fr. rami sup. et inferioris ossis pubis l. dx

S3250 Fr. ramus sup. ossis pubis l. sin

S3210 Fr. sacri l. dx

S2210 Fr. corporis vertebrae thoraciceae VII et VIII.

S3200 fr. processus transversi vertebrae lumbalis II.-IV.

S3700 Contusio renis l. dx cum hematoma perirenale

S134 Distensio ligg. col. vert. partis cervicalis

S202 Contusio thoracis l. sin

S2730 Contusio pulm. l. sin

S2710 Hemothorax postraumaticum l. sin

S4210 Fr. proc. coracoideus scapulae l. sin

I269 Embolia pulmonum susp.

Po dobu ošetřování ponechte pacientovi

Ústavní pohotovostní chir. služba NsP Rakovník

Dukelských hrdinů 200, 269 01 Rakovník

tel.: +420 313 525 432

e-mail: chirurgie@nemorako.cz

Příjmení a jméno:

Bydliště pacienta:

NÁLEZ ze dne 05.06.04 11:34

Zapsal: Šimek Lubor, MUDr. 05.06.04 12:01

Diagnózy:

R610 Vulnus scissum digiti II. manus l.ain.

W268 Kontakt s nožem, mečem nebo dýkou-Jiné určené místa

před 8mi hod si seřizl dorzolater- stranu II. prstu L ruky nad PIP
loubem - lalok, periferie +

tetanus snad více než 5 let

dop.: vulnus scissum digiti II. man. l.ain. inveter.

ch.: V LA 14 mesokainem, revize, revitalizace okrajů, sutura jedn. a
samoadapt. stehy, krytí, obvaz

alteana 0,5ml i.m.

dop.: fyz. šetření, elevace HK, nemáčet, analgetika při bolesti,

kontrola na cHA pozitivní 7.6.04 dopol. při zhoršení kdykoliv dříve

Zpracoval(a):

Šimek Lubor, MUDr.



Medical prescriptions

VZOR

INSCRIPTIO

| | | |
|---|---------------|---------|
| Kód pojišťovny | RECEPT | poř. č. |
| Údaje platné pro celý recept (výpis, pohotovost, repetatur s počtem opakování, nutná a neodkladná péče, atd.) | | |

PERSONALIA AEGROTI

| | | |
|-------------------|--|----|
| Příjmení a jméno | | |
| Číslo pojištěnce | | f. |
| Bydliště (adresa) | | |

INVOCATIO

| Popl. | Diagnóza ^{?)} | Sk. | Kód | Započ.dopl. | Úhrada |
|-------|------------------------|-----|-----|-------------|--------|
|-------|------------------------|-----|-----|-------------|--------|

ORDINATIO

| | | | | | |
|-----|------------------------|--|----------|--|--|
| Rp. | | | | | |
| | Kalij jodidi | | 1,0 | | |
| | Ephedrin hydrochloridi | | 0,2 | | |
| | Thymi sirupi comp. | | 20,0 | | |
| | Aquae purif. | | ad 100,0 | | |
| | M. f. liquid. | | | | |
| | D. ad lag. | | | | |
| | D. S. 3x denně 1 lžiči | | | | |

MAGISTRALITER

- a) PRAESCRIPTIO (COMPOSITIO)
- b) SUBSCRIPTIO
- c) SIGNATURA

| Popl. | Diagnóza ^{?)} | Sk. | Kód | Započ.dopl. | Úhrada |
|-------|------------------------|-----|-----|-------------|--------|
|-------|------------------------|-----|-----|-------------|--------|

Rp.
 Frontin 0,5 mg
 Exp. orig. No. III (tres)
 D. S. 1 tbl. ráno, 1 tbl. večer

SPECIALITAS

DATUM

Dne:

SIGILLUM ET NOMEN MEDICI

razítko poskytovatele,
 jmenovka, podpis a telefon lékaře

| | |
|------------|--------|
| Připravil: | Vydal: |
|------------|--------|

^{?)} Vypĺňuje se povinně v případě zvýšené úhrady.

At the end of the course, you will be able to:

- understand the system of the terminology of anatomical structures (= easier memorizing of the terms)
- understand the principles of forming more complex terms
- understand a clinical diagnose
- write your own clinical diagnose
- write a medical prescription

Latin pronunciation

Read aloud :

- hypnosis
- ala
- olla
- eupnoe
- ileus
- mucus
- haematoma
- iliacus
- ossa
- diploe
- cubitus
- venae
- diameter
- sacralis
- ulcus
- iris
- sutura
- sigmoideus
- depressor
- area
- oesophagus
- melior
- meatus
- leucocytus

Vowels

A **Ā** B C D **E** **Ē** F G H **I** **Ī** K L M N

O **Ō** P Q R S T **U** **Ū** V X **Y** **Ȳ** Z

Vowels

Long

Ā (father) frāctūra

Ē (sad) artēria

Ī (intrigue) spīna

Ō (door) sensōrius

Ū (boom) ruptūra

Y (analysis) hypophysis

Short

A (cut) lingua

E (met) vertebra

I (intrigue) digitus

I (yes) > **J**

O (on) skeleton

U (put) uterus

Y (lady) tympanum

Diphthongs

AE=Ē (care) anaemia

OE=Ē (care) lagoena

Greek words

OE (o-e) dyspnoe

EU (e-u) euthanasia

Consonants I.

A Ā **B** C **D** E Ē **F** G H I Ī K **L** **M** **N**

O Ō **P** Q **R** S **T** U Ū **V** X Y Ŷ Z

| Consonant/group of consonants | Pronunciation | Example |
|---|-------------------------------------|---|
| 1: c + a, o, u, consonants c + ae, oe, e, i, y | [k] medical [ts] tsar | c <u>a</u> mera, c <u>o</u> sta, c <u>u</u> ltivatio, cr <u>a</u> nium <u>c</u> aecus, c <u>o</u> eliac <u>a</u> , <u>c</u> entrum, c <u>i</u> rculatio, <u>c</u> ynismus |
| 2: ch | [x] lo ch | chirurgia, cholera |

Consonants II.

| Consonant/group of consonants | Pronunciation | Example |
|----------------------------------|---|---|
| 3: g gu + vowel | [g] ground [gv] | gramma, gastritis lingua, sanguis |
| 4: h | [h] house | herba, haematologia |
| 5: j + vowel | [y] yes | iniectio/injectio, maior/major |
| 6: p p + h | [p] present [f] physiology | pneumonia, pulmo phantasia, pharmacia |
| 7: qu+ vowel | [kv] quarrel | aqua, quadriceps |
| 8: r r+h | [r] rupture [r] | vertebra, ruptura rheuma, rhinitis |

Consonants III.

| Consonant/group of consonants | Pronunciation | Example |
|--|------------------------------------|--|
| 9: s/ss <i>s between two vowels and following after l, r, n</i> | [s] some [z] zebra | serum, fossa nasmus, incisura, pulsus, tonsilla, inversus, suspensio |
| 10: t ti + vowel s/t/x + ti + vowel t+h | [t] tongue [tsi] [ty] [t] | trauma, tactus operatio, substantia tibia, ostium, mixtio therapia, thermometrum |
| 11: z | [z] zone | zoologia |

Read aloud :

- cancer, medicamentum, lingua
- thorax, pulsus, contusio
- corpus, exitus, functio
- hemispherium, angulus, fractura
- intestinum, aqua, pharmacon
- oedema, musculus, defectus
- medicus, operatio, infarctus
- homo, bronchus, duodenum
- angina, haemorrhagia, spasmus
- encephalon, bacterium, acne
- migraena, pharynx, dysenteria
- inflammatio, leucaemia, virus
- laparoscopia, typhus, organismus
- therapia, digitus, gingiva
- gangraena, diagnosis, tonsilla
- injectio, lymphra, oxygenium
- vademecum, insufficientia, chirurgia

Grammatical concepts of Latin

Gender

- **Masculine** (e.g. nervus)
- **Feminine** (e.g. fractura)
- **Neutral** (e.g. cerebrum)

Not always intuitive – **you have to learn the gender** of each noun !!!

Number

- **Singular** (=1)
- **Plural** (=2 and more)

Case

- **English:** **the order of the words** in a sentence/phrase gives the information on their grammatical function

e.g. Teacher gives a book to the student.

(**subject** – **verb** – direct **object** – indirect object)

- **Latin:** **the form of each word** in a sentence/phrase gives the information on its grammatical function

e.g. Magister **er** **dat** libr**um** discipulo.

What happens if we swip the order of the words?

- **English: meaning changes**
Student give a book to the teacher.
 - isolated word does not give any information on its function
- **Latin: nothing**
Dat magister**er** libr**um** discipulo**.**
Libr**um** magister**er** discipulo **dat.**
Discipulo **magisterer** libr**um** **dat.** etc.
 - isolated word gives all the information on its grammatical function

All sentences mean the same, because ***the forms of the words did not change!***

How do cases work in medical terms?

- **Nominative** (Nom.) – the **subject** of sth – upright case (1st dictionary entry)
- **Genitive** (Gen.) – functions as English preposition *of*, also possessive function, denotes the declension of a noun (2nd dictionary entry)
- **Accusative** (Acc.) – the object of sth, motion towards sth, **with prepositions** (ad, prope, in, propter, post, ante, etc.)
- **Ablative** (Abl.) – expresses separation or motion away from sth, **with prepositions** (e/ex, a/ab, de, sine, cum, etc.)

status post implantationem osteoprotheseos coxae sine complicationibus

Nominative: statu**s** (the **subject** of the phrase, usually stands first)

Genitive: osteoprothes**eos** (implantation of the osteoprothesis)

cox**ae** (osteoprothesis **of** the hip)

Accusative: implantation**em** (after preposition **post**)

Ablative: complication**ibus** (after preposition **sine**)

What will you find in the dictionary?

English noun is presented only in its single form (nominative singular)

Latin noun is presented in three forms

Muscle =
Bone =

MUSCULUS,
OS,

I,
OSSIS,

M.
N.

Main form
(full nominative)

Genitive ending/or
even full Genitive
form

Gender
abbreviation

CAUTION! When learning new words ALL THREE FORMS are EQUALLY important for the future ability to use the noun in the context.

Genitive ending = Declension

| DECLENSION | 1 st | 2 nd | 3 rd | 4 th | 5 th |
|-----------------|----------------------|---|--|---------------------------------------|----------------------------|
| GENITIVE ENDING | -ae (-es) | -i | -(?)-is | -us | -ei |
| EXAMPLE | coxa, ae , f. | humerus, i , m. cranium, ii, n. | coccyx, gis , f. dens, dentis, m. femur, oris, n. pelvis, is, f. | arcus, us , m. genu, us, n. | facies, es , ei, f. |

Declensions are groups of nouns (or adjective) that use the same set of suffixes (=endings).

Declension

= a group of nouns that form their cases the same way (have the same system of endings), see the **chart**

Each noun belongs to one of **5 declensions**, the division of nouns into declensions is based on their **stem** (according to Gen. plural form)

- 1st declension – a-stems – ven-**a**-rum
- 2nd declension – o-stems – nerv-**o**-rum
- 3rd declension
 - i-stems – pelv-**i**-um
 - consonant stems – dolo-**r**-um, pon-**t**-um, sectio-**n**-um
- 4th declension – u-stems – duct-**u**-um
- 5th declension – e-stems – faci-**e**-rum



Latin and Greek declensions

LATIN AND GREEK DECLENSIONS

| Declens. | | I. | | | II. | | | | III. | | | | | IV. | | V. |
|--------------------------------------|----|--------------------------------|----------------|-----------------|--------------------------------|--------------------------------|----------------|--------------|--|---|------------------------------------|-----------------------|--------------------------------|---------------|-------------|---------------|
| Paradigm | | <i>vena</i> | <i>systole</i> | <i>diabetes</i> | <i>nervus</i> | <i>septum</i> | <i>nephros</i> | <i>colon</i> | <i>dolor</i> | <i>corpus</i> | <i>pelvis</i> | <i>dosis febris</i> | <i>rete</i> | <i>ductus</i> | <i>genu</i> | <i>facies</i> |
| Gender | | f. | f. | m. | m. | n. | m. | n. | m. + f. | n. | m. + f. | m. + f. | n. | m. | n. | f. |
| S i n g u l a r | 1. | -a | -e | -es | -us/-er | -um | -os | -on | ? | ? | -is/-es | -(s)is/ -xis/-osis | -ar/-e/ -al | -us | -u | -es |
| | 2. | -ae | -es | -ae | -i | -i | -i | -i | -is | -is | -is | -is/-eos | -is | -us | -us | -ei |
| | 4. | -am | -en | -am | -um | 1 | -um | 1 | -em | 1 | -em | -im/-in | 1 | -um | 1 | -em |
| | 6. | -a | -e | -a | -o | -o | -o | -o | -e | -e | -e / (-i) | -i | -i | -u | -u | -e |
| P l u r a l | 1. | -ae | -ae | -ae | -i | -a | -i | -a | -es | -a | -es | -es | -ia | -us | -ua | -es |
| | 2. | -arum | -arum | -arum | -orum | -orum | -orum | -orum | -um | -um | -ium | -ium | -ium | -uum | -uum | -erum |
| | 4. | -as | -as | -as | -os | 1 | -os | 1 | -es | 1 | -es | -es | 1 | -us | 1 | -es |
| | 6. | -is | -is | -is | -is | -is | -is | -is | -ibus | -ibus | -ibus | -ibus | -ibus | -ibus | -ibus | -ebus |
| | | + Adj. of 1st decl. F | | | + Adj. of 2nd decl. M | + Adj. of 2nd decl. N | | | + Compa -rative forms of adj. M+F | + Com parative forms of adj. N | + Adj. of 3rd decl. M + F | | + Adj. of 3rd decl. N | | | |

Stem of a word

- = a form to which affixes (endings) can be attached

IT IS CRUCIAL TO KNOW THE STEM TO CREATE ALL OTHER CASES !!!

- **In Latin we need to remove the genitive ending in order to gain the genitive stem**

| | | | | |
|--------|-----------|-----------|--------|---------|
| ven-a | humer-us | dol-or | arc-us | faci-es |
| ven-ae | humer-i | dolor-is | arc-us | faci-ei |
| | | corp-us | | |
| | diamet-er | corpor-is | gen-u | |
| | diametr-i | de-ns | gen-us | |
| | | dent-is | | |

Adjectives

= words that give new information on nouns, modify nouns

Adjectives always have to correspond with the noun to which they belong in gender, number and case!!!!

fractura**a** ulnae dextrae complicata**a**
vertebra**e** thoracic**ae**
ad lagoen**am** fusc**am**
cum anaemia**a** pernicios**a**

Why do you think this is so?

Prepositions

- with **accusative**
 - **ad** = towards, to – ad cranium
 - **ante** = before – ante fracturam
 - **post** = after – post operationem
 - **per** = through – per rectum
 - **in** (motion) = towards, into – in lagoenam
 - **prope** (motion) = near to – prope ulnam
 - **propter** = because of – propter anaemiam
- with **ablative**
 - **e/ex** = out of – e scatula
 - **a/ab** = from, by – a medico
 - **sine** = without – sine insufficientia
 - **cum** = with – cum digito medio
 - **pro** = for the sake of – pro adulto

Exercise

- Assign the words from the vocabulary in Handout 1 to their declensions using the chart
- Decide the stem of each word