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O5

Outcome-basierte Curriculumsevaluation

BCIME team

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Beschreibung des Arbeitspaketes

Output Bezeichnung	O5
Output Titel	Outcome-basierte Curriculumsevaluation
Output Beschreibung (einschließlich: Elemente der Innovation, erwartete Auswirkungen und Übertragbarkeitspotenzial)	Dieser Output umfasst den umfassenden Bericht der ergebnisbasierten Curricula-Inhalte, die von Expert*innen aus der Medizin und dem Gesundheitswesen (Lehrende) eingehend validiert wurden. Es wird auch versucht, die Qualität der erstellten Curricula-Beschreibungen zu verbessern und die ergebnisbasierte Methodik an die breite Gemeinschaft von Lehrenden und Studierenden an den Partnerinstitutionen zu liefern.
Output Typ	Kurs / Curriculum – Design und Entwicklung
Arbeitsteilung, die Aufgaben, die zur Produktion des intellektuellen Outputs führen, und die angewandte Methodik	Folgende Aufgaben bestehen für die einzelnen Partner Institutionen: *** UPJS - Inhaltsvalidierung des gegebenen Curriculumteils in lokaler Sprache (medizinische Disziplin), der mithilfe der Curriculum-Management-Plattform beschrieben wurde. Inhaltsüberprüfung des Curriculumteils in Englisch (medizinische Hauptdisziplin), der von einer anderen Partnereinrichtung beschrieben wurde. *** JU - Inhaltsvalidierung des gegebenen Curriculumteils in lokaler Sprache (medizinische Disziplin), der mithilfe der Curriculum-Management-Plattform beschrieben wurde. Inhaltsüberprüfung des Curriculumteils in Englisch (medizinische Hauptdisziplin), der von einer anderen Partnereinrichtung beschrieben wurde. *** UMF - Inhaltsvalidierung des gegebenen Curriculumteils in lokaler Sprache (medizinische Disziplin), der mithilfe der Curriculum-Management-Plattform beschrieben wurde. Inhaltsüberprüfung des Curriculumteils in Englisch (medizinische Hauptdisziplin), der von einer anderen Partnereinrichtung beschrieben wurde. *** UAU - Bereitstellung der Inhaltsvalidierung des gegebenen Curriculumteils in lokaler Sprache (medizinische Disziplin), der mithilfe der Curriculum-Management-Plattform beschrieben wurde. . Inhaltsüberprüfung des Curriculumteils in Englisch (medizinische Hauptdisziplin), der von einer anderen Partnereinrichtung beschrieben wurde. *** MU - Inhaltsvalidierung des gegebenen Curriculumteils in lokaler Sprache (medizinische Disziplin), der mithilfe der Curriculum-Management-Plattform beschrieben wurde. Inhaltsüberprüfung des Curriculumteils in Englisch (medizinische Hauptdisziplin), der von einer anderen Partnereinrichtung beschrieben wurde.
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1. Einleitung

In diesem intellektuellen Output bieten wir eine eingehende Analyse der Lernziele (LOs) und der Beschreibungen der Lerneinheiten, die zur Beschreibung des Curriculums der Anatomie verwendet werden, wie sie von allen Partnern in der EDUportfolio-Plattform aufgezeichnet wurden. Diese Lernziele und Beschreibungen wurden von Inhaltsexpert*innen überprüft und validiert.

2. Methoden

Für die manuelle Analyse der LOs und Lerneinheitenbeschreibungen exportierten wir alle Curricula aus der EDUportfolio-Plattform in ein Excel-Format (siehe Anhang 2).

2.1 Quantitative Analyse

Basierend auf der Excel-Datei analysierten und beschrieben wir zunächst die Anzahl der LOs und Lerneinheitenbeschreibungen, die von jedem Partner bereitgestellt wurden. Außerdem erstellten wir mit der Software wordle[1] eine Wordcloud aller LOs. Dazu wurden vor der Erstellung der Wordcloud irrelevante Wörter, wie "und", "der" etc. entfernt.

2.2 Qualitative Analyse

Alle Lernziele wurden deduktiv und unabhängig voneinander von zwei erfahrenen BCIME-Teammitgliedern mit einem Hintergrund in der Ausbildung von Gesundheitsberufen von JU und UAU kodiert. Divergierende Kodierungen wurden durch Diskussion gelöst und es wurde in allen Fällen ein Konsens erreicht. Für die Kodierung wurde ein Kodierleitfaden entwickelt, der die folgenden Kategorien umfasst:

1) "Lernkategorie":
   - Kognitiv
   - Psychomotorisch
   - Affektiv
2) Blooms Wissensdimension [1,2]:
   - Faktisch
   - Konzeptuell
   - Prozedural
   - Metakognitiv
3) Blooms kognitive Prozessdimension [1,2]:
   - Erinnern
   - Verstehen
   - Anwenden
   - Analysieren
   - Evaluieren
   - Erstellen

[1] http://www.wordle.net/

4) MeSH Kapitel "Anatomie" mit den folgenden Hauptkategorien [3]:
   - Körperregionen (A01)
   - Muskuloskeletales System (A02)
   - Verdauungssystem (A03)
   - Respiratorisches System (A04)
   - Urogenitales System (A05)
   - Endokrines System (A06)
   - Kardiovaskuläres System (A07)
   - Nervensystem (A08)
   - Sensorische Organe (A09)
   - Gewebe (A10)
   - Zellen (A11)
   - Flüssigkeiten und Sekretionen (A12)
   - Stomatognathisches System (A14)
   - Hämatopoetisches und Immunsystem (A15)
   - Embryologisches System (A16)

Für diese Kategorie haben wir entschieden, dass zwei Kodierungen pro LO besser geeignet sind, um sie zu beschreiben, da in vielen Fällen ein LO mit mehr als einer MeSH-Kategorie verbunden war. Der Kodierleitfaden findet sich in Anhang 1.

Die Beschreibungen der Lerneinheiten wurden nur auf der Basis von MeSH analysiert, da sie keine spezifischen Verben enthielten, die auf Blooms Niveau hinweisen. Nachdem ein Konsens erzielt worden war, wurden die Ergebnisse allen Partnern präsentiert und mit ihnen diskutiert.

3. Ergebnisse

3.1 Deskriptive/quantitative Analyse

3.1.1 Anzahl Lernziele in der Anatomie

Insgesamt wurden für die fünf Partner-Curricula in Anatomie 805 verschiedene Lernziele von den Lehrenden definiert, um ihr Curriculum zu beschreiben und in die EDUportfolio-Plattform einzugeben. Abbildung 1 zeigt die Verteilung der Lernziele auf die fünf Partner-Curricula. Zusätzlich hat JU 52 Beschreibungen von Lerneinheiten eingegeben.

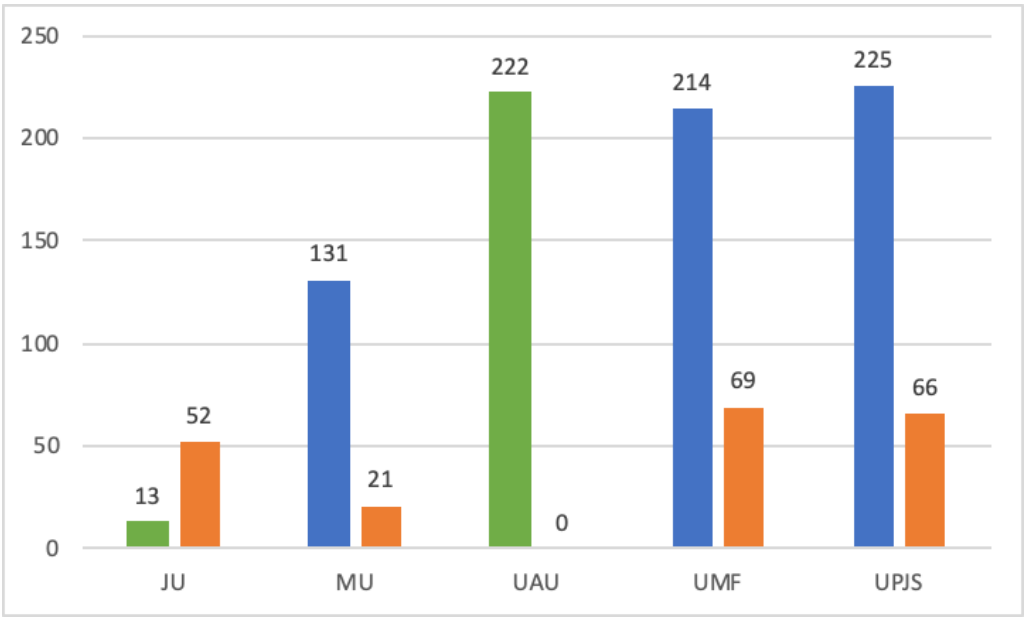

Abb. 1 Anzahl Lernziele (grün=Kurs-level, blau= Lerneinheit level und Lerneinheiten = orange in den Anatomie-Curricula der Partnerinstitutionen.

Die Anzahl der Lernziele zur Beschreibung des Anatomie-Curriculums der medizinischen Partnerhochschulen reicht von 13 (JU) bis zu 225 (UPJS), was auf einen heterogenen Granularitätsgrad und Mapping-Ansatz hinweist, eine der bekannten Herausforderungen beim Curriculum-Mapping. Die Lernziele wurden entweder auf Kursebene (JU und UAU) oder auf Ebene der Lerneinheiten (MU, UMF und UPJS) definiert. JU liefert wesentliche (lernziel-ähnliche) Informationen über den Inhalt der Lerneinheiten innerhalb der Beschreibungen. Es wurden keine Lernziele auf Modulebene definiert.

3.1.2 Häufigkeit der Schlüsselwörter

Abbildung 2 zeigt eine Wordcloud mit der Darstellung der Lernziele. Häufig verwendete Begriffe waren beispielsweise "explains", "structures", "systems", "describes" und "functions".

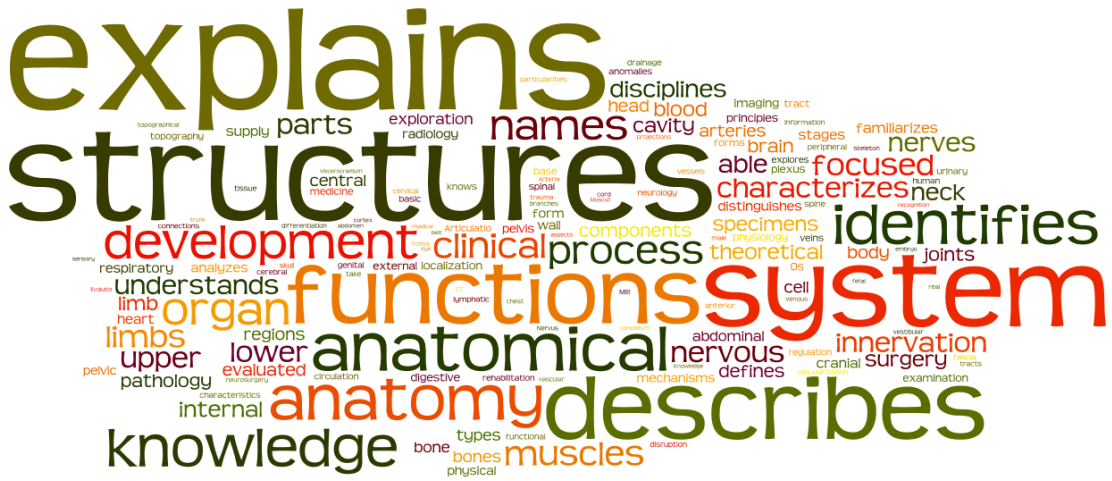

Abb. 2 Wordcloud der Lernziele und Lerneinheitbeschreibungen aller Partnercurricula in Anatomie (Füllwörter wurden entfernt).

Abbildung 3 zeigt die Häufigkeit der Verben, die in den Lernzielen verwendet wurden.

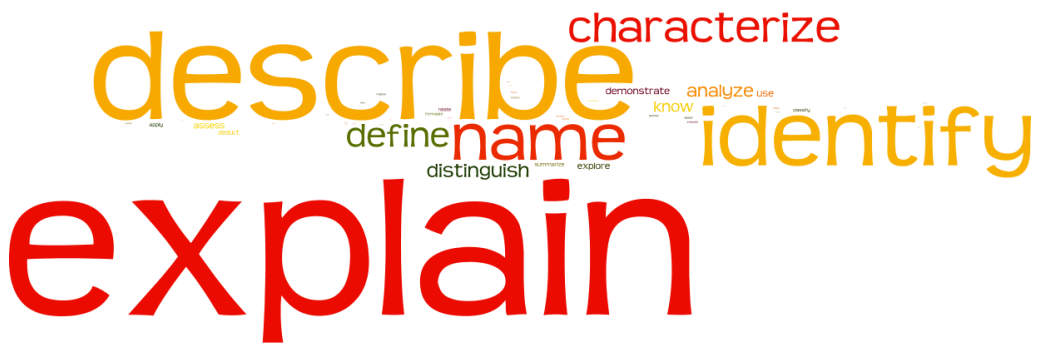

Abb. 3 Wordcloud von Verben, die in den Lernzielen verwendet wurden, um die Anatomie Curricula zu beschreiben.

3.2 Qualitative Analyse

3.2.1 Analyse der Lernziele basierend auf der Lernkategorie

Von den insgesamt 805 Lernzielen wurden 794 als kognitiv kategorisiert, vier als affektiv (alle von JU) und sieben als psychomotorisch (fünf von UMF, eine von MU und eine von UPJS). Die psychomotorischen LOs zielten auf körperliche Untersuchungsfertigkeiten ab, für die anatomisches Wissen unerlässlich ist, wie z.B. Palpation. Die affektiven LOs umfassten Aspekte wie Professionalität und Teamarbeit.

3.2.2 Analyse der Lernziele basierend auf der Bloom Taxonomie

Die 794 kognitiven LOs wurden anhand der Bloomschen Taxonomie weiter kodiert (Tabelle 1). Die LOs der meisten Partner wurden als faktisch kategorisiert, außer bei UAU, wo etwa 67 % der LOs als konzeptionell und nur etwa 30 % als faktisch kategorisiert wurden. Prozedurale LOs waren bei allen Partnern weniger häufig.

Tabelle 1. Häufigkeiten der Bloom'schen Wissensdimension der Partner-LOs, die häufigste vorkommende Ebene ist gelb markiert.

	Faktisch	Konzeptuell	Prozedural
JU	4 (44.4%)	2 (22.2%)	3 (33.3%)
MU	81 (62.3%)	34 (26.2%)	15 (11.5%)
UAU	62 (27.9%)	149 (67.1%)	11 (5.0%)
UMF	106 (50.7%)	63 (30.2%)	40 (19.1%)
UPJS	139 (62.1%)	82 (36.6%)	3 (1.3%)
Total	392 (49.4%)	330 (41.6%)	72 (9.0%)

Tabelle 2 zeigt die Häufigkeiten der Bloom'schen Dimension der kognitiven Prozesse für die Anatomie-Curricula aller Partner. Für drei Partner (MU, UAU, UPJS) ist die Dimension "Understand" am häufigsten, während "Remember" für JU und "Apply" für UMF am häufigsten vorkommt. Für alle Partner sind die Dimensionen " Create ", "Evaluate" und "Analyze" weniger häufig.

Tabelle 2. Blooms kognitive Prozessebenen für jeden Partner, die am häufigsten vorkommende Ebene ist gelb markiert.

	Remember	Understand	Apply	Analyze	Evaluate	Create
JU	5 (55.6%)	2 (22.2%)	2 (22.2%)	0	0	0
MU	27 (20.8%)	57 (43.8%)	31 (23.8%)	1 (0.8%)	13 (10.0%)	1 (0.8%)
UAU	2 (0.9%)	201 (90.5%)	6 (2.7%)	3 (1.4%)	9 (4.1%)	1 (0.4%)
UMF	43 (20.6%)	63 (30.1%)	77(36.8%)	24 (11.4%)	0	2 (0.1%)
UPJS	58 (25.9%)	133 (60.4%)	5 (2.2%)	25 (11.2%)	1 (0.5%)	2 (0.8%)
Total	135 (17.0%)	456 (75.4%)	122 (15.3%)	53 (6.7%)	23 (2.9%)	6 (0.7%)

3.2.3 Analyse der Lernziele basierend auf anatomische Kapitel (MeSH) und andere medizinische Gebiete

Die Analyse der Kodierungen auf Basis von MeSH über alle Curricula hinweg zeigt, dass fast 22 % der LOs mit dem Nervensystem (A08) in Verbindung stehen (Tabelle 3). Die detaillierte Analyse der Partnercurricula zeigt, dass für UAU, UMF und UPJS LOs, die sich auf das Nervensystem beziehen, am häufigsten sind, für UMF sogar über 30% ihrer LOs ausmachen. Im Gegensatz dazu konzentriert sich das Anatomie-Curriculum der MU und JU mehr auf allgemeine Körperregionen.

Tabelle 3. Kodierungen von LOs und Lerneinheitenbeschreibungen basierend auf MeSH (zwei Kodierungen möglich) für alle Partnercurricula. * umfasst LOs und Lerneinheitenbeschreibungen.

MeSH Kategorie	JU*	MU	UAU	UMF	UPJS	Total
Körperregionen (A01)	17 (23.29%)	25 (18.80%)	14 (5.30%)	15 (5.49%)	37 (14.86%)	108 (10.78%)
Kardiovaskuläres System (A07)	4 (5.48%)	19 (14.29%)	14 (5.30%)	28 (10.26%)	31 (12.45%)	96 (9.58%)
Zellen (A11)	0	0	26 (9.85%)	3 (1.10%)	1 (0.40%)	30 (2.99%)
Verdauungssystem (A03)	4 (5.48%)	5 (3.76%)	7 (2.65%)	7 (2.56%)	4 (1.61%)	27 (2.69%)
Embryologisches System (A16)	8 (10.96%)	1 (0.75%)	14 (5.30%)	35 (12.82%)	0	68 (6.79%)
Endokrines System (A06)	0	10 (7.52%)	5 (1.89%)	4 (1.47%)	1 (0.40%)	20 (2.00%)

MeSH Kategorie	JU*	MU	UAU	UMF	UPJS	Total
Flüssigkeiten & Sekretionen (A12)	0	0	5 (1.89%)	3 (1.10%)	0	8 (0.80%)
Blut und Immun-system (A15)	0	9 (6.77%)	14 (5.30%)	6 (2.20%)	4 (1.61%)	33 (3.29%)
Integumentales System (A17)	0	3 (2.26%)	2 (0.76%)	0	5 (2.01%)	10 (1.00%)
Muskuloskeletales System (A02)	12 (16.44%)	15 (11.28%)	24 (9.47%)	52 (19.05%)	51 (20.48%)	155 (15.47%)
Nervensystem (A08)	10 (13.70%)	11 (8.27%)	45 (17.05%)	87 (31.87%)	65 (26.10%)	218 (21.76%)
Respiratorisches System (A04)	2 (2.74%)	4 (3.01%)	9 (3.41%)	6 (2.20%)	8 (3.21%)	29 (2.89%)
Sensorische Organe (A09)	3 (4.11%)	20 (15.04%)	25 (9.47%)	4 (1.47%)	13 (5.22%)	65 (6.49%)
Stomatognathi-sches System (A14)	2 (2.74%)	0	7 (2.65%)	5 (1.83%)	6 (2.41%)	20 (2.00%)
Gewebe (A10)	0	0	25 (9.47%)	3 (1.10%)	11 (4.42%)	39 (3.89%)
Urogenitales System (A05)	4 (5.48%)	9 (6.77%)	19 (7.20%)	9 (3.30%)	9 (3.61%)	50 (4.99%)
Nicht zutreffend	7 (9.59%)	2 (1.50%)	8 (3.03%)	6 (2.20%)	3 (1.20%)	26 (2.59%)

Insgesamt 32 LOs bzw. Beschreibungen (UMF: 21, MU:9, UAU:1, JU:6) beziehen sich auf das klinische Fach Radiologie, in dem die Studierenden in der Lage sein müssen, anatomische Strukturen in radiologischen Bildern zu identifizieren, wie z. B. " Student identifies somatic leading structures, body cavities and organ systems in radiological images". Außerdem beziehen sich fünf Lernziele (UMF) auf das klinische Fach Chirurgie, wie z. B. "Student characterizes the particularities of history taking and narrative medicine in neurosurgery".

4. Diskussion und Schlussfolgerungen

Die Anzahl der LOs zur Beschreibung der Anatomie-Curricula der Partner variiert erheblich und insbesondere das JU-Curriculum zeigt mit 13 LOs eine geringere Granularität als die anderen Curricula. Der Hauptgrund dafür ist, dass JU die Lerneinheitenbeschreibungen verwendet und auf diese Weise dedizierte Beschreibungen der Inhalte zur Verfügung stellt, die wir ebenfalls in unsere Analyse einbezogen haben. Die unterschiedliche Granularität ist eine bekannte Herausforderung bei der Abbildung von Curricula und es ist nicht überraschend, dass wir diesen Aspekt auch in unserer Analyse entdeckt haben.

Basierend auf unserer Analyse empfehlen wir, Curricula auf einer hohen Granularitätsebene zu beschreiben. Solche feingranularen LOs sind spezifischer und hilfreich für die Lernenden, aber auch nützlich bei der Analyse eines Curriculums auf institutioneller und Fakultätsebene. Darüber hinaus kann die Angabe einer übergreifenden Granularitätsebene, unter der die feingranularen LOs subsumiert werden, Lehrenden helfen, einen schnellen Überblick über ein Curriculum zu erhalten.

Die Ergebnisse der LO-Analyse zeigen einen deutlichen Schwerpunkt der anatomischen Curricula aller Partner auf der kognitiven Ebene, wobei nur sehr wenige LOs auch die psychomotorische und affektive Ebene abdecken.

Bei der Bloom'schen Wissensdimension war die faktische Dimension in den Anatomie-Curricula der Partner am stärksten ausgeprägt, mit Ausnahme des UAU-Curriculums, das mit ca. 67% einen deutlichen Schwerpunkt auf der konzeptuellen Dimension hat. Der Grund für diesen Unterschied könnte sein, dass die Anatomie-LOs auf dem deutschen kompetenzbasierten Lernzielkatalog (NKLM[2]) basieren, der nicht fachspezifisch ist, sondern darauf abzielt, Kompetenzen zu definieren, die ein*e Absolvent*in nachweisen muss. Um ein ausgewogenes und modernes Anatomie-Curriculum zu entwickeln, empfehlen wir, alle faktischen, konzeptionellen sowie prozeduralen Kenntnisse und Fähigkeiten der Lernenden zu berücksichtigen. Typischerweise sind in medizinischen Curricula die faktischen Wissensdimensionen in den vorklinischen Kursen stärker ausgeprägt, während die konzeptionellen und prozeduralen Dimensionen in den klinischen Kursen stärker betont werden. In den Anatomie-Curricula unserer Partner sahen wir jedoch einige gute Beispiele dafür, wie klinische Fertigkeiten und die konzeptionelle und prozedurale Wissensdimension auch während der vorklinischen Ausbildung eingeführt werden können, z. B. durch die Kombination von Anatomieausbildung mit klinischen Untersuchungsfertigkeiten oder radiologischer Bildinterpretation.

Bei der Bloom'schen kognitiven Dimension haben drei Anatomie-Curricula einen Schwerpunkt auf der Dimension "Verstehen" (MU, UPJS, UAU), während JU den Fokus auf "Erinnern" und UMF auf "Anwenden" legt. Auffällig ist, dass bei UAU mehr als 90% der LOs in der Dimension "Verstehen" kodiert wurden, was auch an der Konzeptualisierung des NKLM liegen könnte. LOs in den Dimensionen "Analysieren", "Bewerten" und "Erstellen" sind in allen Partnercurricula nicht sehr häufig. Obwohl die meisten der analysierten LOs keine spezifischen Kontextinformationen enthielten und wir keine direkten Rückschlüsse auf die angewandten Lehrmethoden ziehen können, könnte der Schwerpunkt auf "Erinnern" und "Verstehen" auf einen Fokus auf traditionellere Formate, wie z.B. Leichensektionen oder Vorlesungen, hinweisen. Typischerweise verlangen diese Formate von den Studierenden nicht, etwas zu erschaffen, wie es bei modernen Lehrformaten wie 3D-Druck, Rapid Prototyping oder Anatomie am Lebenden[3]. Eine Evaluation der Lehr- und Lernaktivitäten, die in den Anatomie-Curricula der Partner angewandt werden, ist notwendig, um diesen Aspekt weiter zu untersuchen.

Die Analyse der LOs basierend auf den Anatomie-MESH-Kategorien zeigt eine Tendenz zur Fokussierung auf das Nervensystem in drei der Partner-Curricula, während Aspekte wie "Flüssigkeiten und Sekrete" oder das "Integumentäre System" weniger häufig vorkommen. Die Häufigkeit der LOs, die auf den verschiedenen anatomischen Kategorien basieren, variiert erheblich. Zum Beispiel beziehen sich

[2] http://www.nklm.de/

[3] Estai M, Bunt S (2016). Best teaching practices in anatomy education: A critical review, Annals of Anatomy - Anatomischer Anzeiger; 208:151-7.

beim UMF-Curriculum fast 3/4 der LOs auf vier anatomische Bereiche (Nerven-, Muskuloskeletales-, Herz-Kreislauf- und Embryologisches System), während bei MU oder UAU diese Bereiche nur von etwa 35% der LOs abgedeckt werden.

Die Anatomie-Curricula aller Partner, mit Ausnahme der UPJS, umfassen LOs, die mit der Radiologie (Bildinterpretation) zusammenhängen, und UMF beinhaltet auch LOs aus der Chirurgie, was auf den interdisziplinären Lehransatz der Anatomie hinweist. Da wir uns auf die Analyse der Anatomie-Curricula und nicht auf andere Teile des Curriculums konzentriert haben, können wir den wahren Grad der Interdisziplinarität noch nicht ermitteln, indem wir z.B. anatomiebezogene LOs in der Chirurgie und Radiologie identifizieren. Mit der EDUportfolio-Plattform und den im Rahmen von BCIME entwickelten Methoden erwarten wir jedoch, dass dies in naher Zukunft möglich sein wird.

Schließlich sehen wir einen Bedarf für die Entwicklung von nationalen kompetenzbasierten Lernzielkatalogen, wie sie in Deutschland (NKLM) und Polen[4] vorhanden sind. Das Vorhandensein solcher Kataloge kann die Ausbildung bestimmter Studienrichtungen auch auf nationaler und internationaler Ebene deutlich verbessern und vereinheitlichen.

5. Referenzen

[1] Anderson LW, Krathwohl DR, Airasian PW, et al. A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. New York, NY: Addison Wesley Longman; 2001.

[2] https://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy/

[3] MeSH Browser https://meshb.nlm.nih.gov/

[4] https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20190001573

Appendix 1

Kodierleitfaden

Coding guideline

For coding the learning outcomes we agreed on the following coding rules based on Bloom's revised taxonomy[5].

Additional rules agreed upon:

1) Learning categories

Learning outcomes are coded as either cognitive, psychomotor (skills), or affective.

- Cognitive: Aims to develop the mental skills and the acquisition of knowledge of the individual.
- Psychomotor: Includes utilizing motor skills and the ability to coordinate them.
- Affective: Includes the feelings, emotions and attitudes of the individual.

2) Knowledge dimension

Based on the description in [2] we agreed on the following specific rules:
LOs covering one or more of the following aspects will be coded as "Conceptual":

- Topographical relations between organs or systems (e.g. 1494)
- Anything related to importance or relevance (e.g. 1509)
- Summarizing all knowledge about something (e.g. 1464)
- Processes, functions, mechanisms
- Projections or projection lines
- Aspects of clinical knowledge, diseases, or treatments

LOs demonstrating anatomical knowledge on cadavers or radiology images (e.g. 1451) will be coded as "Procedural".

3) Cognitive process dimension

In this category we will use the category the verb is mapped to [2]. If verbs are not explicitly covered we take the most similar one.

4) MeSH

We code the LOs based on first level of the anatomy category (A)[6].
If two MeSH chapters apply, we coded both.

[5] https://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy/
[6] https://meshb.nlm.nih.gov/treeView

Appendix 2

Tabelle mit den Kodierungen

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student analyzes surface anatomy	LO	analyzes	cognitive	Factual	Analyze	Body regions (A01)	Body regions (A01)	UPJS
Student distinguishes cardinal planes	LO	distinguishes	cognitive	Factual	Analyze	Body regions (A01)	Body regions (A01)	UPJS
Student distinguishes superior and inferior mediastinum	LO	distinguishes	cognitive	Factual	Analyze	Body regions (A01)	Body regions (A01)	UPJS
Student distinguishes and defines abdominal and peritoneal cavity	LO	distinguishes	cognitive	Factual	Analyze	Body regions (A01)	Body regions (A01)	UPJS
Student identifies basic morphological structures on human preparations.	LO	identifies	cognitive	Factual	Apply	Body regions (A01)	Body regions (A01)	MU
Student identifies basic anatomical structures in these regions (i.e. bones, joints, muscles, internal organs, blood vessels and nerves - knowledge of these structures builds on previous studies of systemic anatomy).	LO	identifies	cognitive	Factual	Apply	Body regions (A01)	Body regions (A01)	MU
Student uses theoretical knowledge to be oriented in terms of position of individual organs.	LO	uses	cognitive	Factual	Apply	Body regions (A01)	Body regions (A01)	MU
Student uses theoretical knowledge to be oriented about the mutual topographic relationships with other organs.	LO	uses	cognitive	Factual	Apply	Body regions (A01)	Body regions (A01)	MU
Student identifies structures on the radiological method images.	LO	identifies	cognitive	Procedural	Apply	Body regions (A01)	Body regions (A01)	MU
Student identifies basic anatomical structures in radiological methods.	LO	identifies	cognitive	Procedural	Apply	Body regions (A01)	Body regions (A01)	MU
Student identifies somatic leading structures, body cavities and organ systems in radiological images.	LO	identify	cognitive	Procedural	Apply	Body regions (A01)	Body regions (A01)	UAU
Student identifies the lateral visceral lodges of the neck	LO	identifies	cognitive	Factual	Apply	Body regions (A01)	Body regions (A01)	UMF
Student identifies the main anatomotopographic regions of the trunk	LO	identifies	cognitive	Factual	Apply	Body regions (A01)	Body regions (A01)	UMF
Student identifies The diaphragm's hiatus and groin canal structures	LO	identifies	cognitive	Factual	Apply	Body regions (A01)	Body regions (A01)	UMF
Student identifies visible structures of upper limb	LO	identifies	cognitive	Conceptual	Apply	Body regions (A01)	Body regions (A01)	UPJS
Student discusses about abdominal anatomical structures	LO	discusses	cognitive	Factual	Create	Body regions (A01)	Body regions (A01)	UPJS
Student assesses the relationship between the different studied organs.	LO	assesses	cognitive	Conceptual	Evaluate	Body regions (A01)	Body regions (A01)	MU
Student assesses correlation with other systems.	LO	assesses	cognitive	Conceptual	Evaluate	Body regions (A01)	Body regions (A01)	MU
Student assesses relationships between individual anatomical structures in topographic regions.	LO	assesses	cognitive	Conceptual	Evaluate	Body regions (A01)	Body regions (A01)	MU
Student assesses interaction with other systems.	LO	assesses	cognitive	Conceptual	Evaluate	Body regions (A01)	Body regions (A01)	MU
Student assesses interrelationships between other organs.	LO	assesses	cognitive	Conceptual	Evaluate	Body regions (A01)	Body regions (A01)	MU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student evaluates normal topographical arrangement of individual regions.	LO	evaluates	cognitive	Conceptual	Evaluate	Body regions (A01)	Body regions (A01)	MU
Student assesses the anatomical structures on radiological method images	LO	assesses	cognitive	Procedural	Evaluate	Body regions (A01)	Body regions (A01)	MU
Student assesses the anatomical structures on radiological images.	LO	assesses	cognitive	Procedural	Evaluate	Body regions (A01)	Body regions (A01)	MU
Student evaluates the studied anatomical structures on radiological images.	LO	evaluates	cognitive	Procedural	Evaluate	Body regions (A01)	Body regions (A01)	MU
Student describes structure and position of organs and leading structures of the body and deduce it from the development.	LO	deduce	cognitive	Conceptual	Evaluate	Body regions (A01)	Body regions (A01)	UAU
Student is able to deduce functions from underlying structures.	LO	deduce	cognitive	Conceptual	Evaluate	Body regions (A01)	Tissues (A10)	UAU
Student describes the topographic structure of the human body and deduce it from the development.	LO	deduct	cognitive	Conceptual	Evaluate	Body regions (A01)	Body regions (A01)	UAU
Student determines palpable structures of upper limb	LO	determines	cognitive	Procedural	Evaluate	Body regions (A01)	Body regions (A01)	UPJS
Student knows development, structure and functions of the human body in physiological and pathological conditions.	LO	knows	cognitive	Conceptual	Remember	Body regions (A01)	Not applicable	JU
Student knows human body structure in a topographic approach (upper and lower limbs, chest, abdomen, pelvis, back, neck, head) and functional (bone and joint system, muscular system, circulatory system, respiratory system, digestive system, urinary system, genital systems, nervous system and sense organs, integument)	LO	knows	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	JU
Student knows topographic relations between particular organs	LO	knows	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	JU
Student defines the topographical regions of the human body.	LO	defines	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	MU
Student defines boundaries, content and individual layers of each region.	LO	defines	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	MU
Student is able to project organs and leading structures onto the body surface.	LO	project (relate)	cognitive	Conceptual	Remember	Body regions (A01)	Not applicable	UAU
Student names the clinical symptoms of expansive processes based on their localisation	LO	names	cognitive	Conceptual	Remember	Body regions (A01)	Not applicable	UMF
Student names the therapeutic possibilities in cerebral tumors	LO	names	cognitive	Factual	Remember	Body regions (A01)	Nervous system (A08)	UMF
Student names the types of intracranial expansive processes other than tumors	LO	names	cognitive	Factual	Remember	Body regions (A01)	Nervous system (A08)	UMF
Student knows the maneuvers required to explore the chest cavity, the serous compartments and their formations	LO	knows	cognitive	Procedural	Remember	Body regions (A01)	Body regions (A01)	UMF
Student defines visible structures of lower limb	LO	defines	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student defines palpable structures of lower limb	LO	defines	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student defines structures of upper limb	LO	defines	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student defines anatomical structures of lower limb	LO	defines	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student defines borders of the neck	LO	defines	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student defines regions of the neck	LO	defines	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student is able to name the parts of upper limb	LO	names	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student names all regions of upper limb	LO	names	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student names spaces of lower limb	LO	names	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student names bones, borders, organs and diaphragms of pelvic floor	LO	names	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student names organs of the neck and describe their function	LO	names	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student names arteries and nerves of abdominal wall	LO	names	cognitive	Factual	Remember	Body regions (A01)	Body regions (A01)	UPJS
Student is able to explain the anatomical basis of physical examination	LO	explain	cognitive	Procedural	Understand	Body regions (A01)	Not applicable	JU
Student is able to infer the relationships between anatomical structures based on in vivo diagnostic tests, in particular in the field of radiology (X-rays, tests using contrast media, computed tomography and nuclear magnetic resonance imaging)	LO	infer	cognitive	Procedural	Understand	Body regions (A01)	Body regions (A01)	JU
Student describes the topographic mutual relations between the internal organs.	LO	describes	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	MU
Student explains morphology.	LO	explains	cognitive	Conceptual	Understand	Body regions (A01)	Not applicable	MU
Student summarizes all knowledge of human anatomy obtained through previous studies.	LO	summarizes	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	MU
Student explains their morphology, basic structure, blood supply, innervation, and basic function.	LO	explains	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	MU
Student demonstrates the structures on cadavers.	LO	demonstrates	cognitive	Procedural	Understand	Body regions (A01)	Body regions (A01)	MU
Student describes basic anatomical structures in radiological methods.	LO	describes	cognitive	Procedural	Understand	Body regions (A01)	Body regions (A01)	MU
Student explains positional and directional ties of different body parts and regions.	LO	explain	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	UAU
Student explains the assignment of organs to organ systems and localize them in the body.	LO	explain	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	UAU
Student explains the compartiments of the small pelvic and the pelvic base in terms of stability.	LO	explain	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UAU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains the connections between body parts, -cavities, and -regions.	LO	explain	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UAU
Student explains the structure and topography of the body parts.	LO	explain	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UAU
Student explains the structure of the human body.	LO	explain	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UAU
Student explains the anatomical description and exploration of the main anatomical topographic regions of the head	LO	explains	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UMF
Student explains the anatomical description and exploration of the main anatomical topographic regions of the neck	LO	explains	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UMF
Student demonstrates head projections and discoveries	LO	demonstrates	cognitive	Procedural	Understand	Body regions (A01)	Body regions (A01)	UMF
Student characterizes dislocations of particular parts of lower limb	LO	characterizes	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student characterizes dislocations of particular parts of upper limb	LO	characterizes	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student characterizes lines of orientation of thoracic borders	LO	characterizes	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes function and innervation of lower limb	LO	describes	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes function of upper limb structures	LO	describes	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes function of lower limb structures	LO	describes	cognitive	Conceptual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student characterizes superficial and deep structures of upper limb	LO	characterizes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student characterizes anatomical structures of the neck	LO	characterizes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student characterizes anatomical structures of the head	LO	characterizes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes anatomic location and directions	LO	describes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes surface anatomy of lower limb	LO	describes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes Mediastinum division	LO	describes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes blood supply and innervation of pelvic floor organs	LO	describes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes regional anatomy of head and neck	LO	describes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes palpable and visible structures of the neck	LO	describes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS
Student describes anatomical structures of retroperitoneal space	LO	describes	cognitive	Factual	Understand	Body regions (A01)	Body regions (A01)	UPJS

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student prepares anatomical specimen of the given studied region with the help of prescribed autopsy procedure and tools.	LO	prepares	skills			Body regions (A01)	Body regions (A01)	MU
Student defines superficial and deep palmar arch	LO	defines	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student analyzes anatomical identification and exploration of the main components of the vascular system of the brain	LO	analyzes	cognitive	Factual	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student is able to anatomically explore and identify the main arteries of the upper limb	LO	explore	cognitive	Procedural	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student is able to anatomically explore and identify the main veins of the upper limb	LO	explore	cognitive	Procedural	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student is able to anatomically explore the organs that make up the cardio-vascular apparatus (both in situ and extracted from the body)	LO	explore	cognitive	Procedural	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student categorizes components of Pericardium	LO	categorizes	cognitive	Conceptual	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student is able to distinguish lower limb arteries	LO	distinguishes	cognitive	Conceptual	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student distinguishes arteries and veins of the thoracic wall	LO	distinguishes	cognitive	Factual	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student distinguishes atriums and ventricles of the heart	LO	distinguishes	cognitive	Factual	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student distinguishes types of cranial tributaries and know their names	LO	distinguishes	cognitive	Factual	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student distinguishes ausculation sites	LO	distinguishes	cognitive	Procedural	Analyze	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student identifies arteries according to the internationally recognized anatomical terminology (PNA) using the human anatomical preparations.	LO	identifies	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student identifies basic morphological formations on the heart preparations.	LO	identifies	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student identifies describe the venous system according to the internationally recognized anatomical terminology (PNA) using the human anatomical preparations.	LO	identifies	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student uses theoretical knowledge about the origin and structure of the venous system.	LO	uses	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student uses theoretical knowledge to be oriented about the placement of the heart and indicates on cadavers the topographical relationships of the heart with other organs.	LO	uses	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student identifies the pericardio-cardio-orificial projection lines on the chest wall	LO	identifies	cognitive	Conceptual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student identifies the main cranio-facial venous anastomoses	LO	identifies	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student identifies the main cranio-facial arterial anastomoses	LO	identifies	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student identifies the main arteries of the lower limb	LO	identifies	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student identifies the main veins of the lower limb	LO	identifies	cognitive	Factual	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student identifies the main auscultation areas and the apexian shock on the chest wall	LO	identifies	cognitive	Procedural	Apply	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student assesses the interrelationship between arteries and other organs.	LO	assesses	cognitive	Conceptual	Evaluate	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student assesses interrelationship between the heart with other organs.	LO	assesses	cognitive	Conceptual	Evaluate	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student evaluates the studied anatomical structures of the heart on radiological method images.	LO	evaluates	cognitive	Procedural	Evaluate	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student explains structure and function of the circulus arteriosus Willisii and deduce it normal variants from the development.	LO	deduct	cognitive	Conceptual	Evaluate	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student defines arteries according to the internationally recognized anatomical terminology (PNA) using the human anatomical preparations.	LO	defines	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student defines human anatomical preparation according to the internationally recognized anatomical terminology (PNA) of the heart.	LO	defines	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student defines describe the venous system according to the internationally recognized anatomical terminology (PNA) using the human anatomical preparations.	LO	defines	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student knows morphology of parts of the venous system.	LO	knows	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student names parts of the venous system.	LO	names	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student knows the principles of medical thrombolysis, mechanical thrombectomy, and surgical treatment in ichemic brain disease	LO	knows	cognitive	Conceptual	Remember	Cardiovascular system (A07)	Nervous system (A08)	UMF
Student names the clinical symptoms of ICH	LO	names	cognitive	Factual	Remember	Cardiovascular system (A07)	Nervous system (A08)	UMF
Student names the anatomy of intracranial vascualature	LO	names	cognitive	Factual	Remember	Cardiovascular system (A07)	Nervous system (A08)	UMF
Student names the particularities of brain vascularization physiology	LO	names	cognitive	Factual	Remember	Cardiovascular system (A07)	Nervous system (A08)	UMF
Student names the etiology of spontaneus intracranial/intracerebral hemorrhage	LO	names	cognitive	Factual	Remember	Cardiovascular system (A07)	Nervous system (A08)	UMF
Student names the clinical symptoms and imaging aspects of subarachnoid hemorrhage	LO	names	cognitive	Factual	Remember	Cardiovascular system (A07)	Nervous system (A08)	UMF
Student knows the maneuvers needed for exposing the pericardial sinuses	LO	knows	cognitive	Procedural	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student knows difference between artery and vein	LO	knows	cognitive	Conceptual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student names and explains function of large arteries of brain	LO	names	cognitive	Conceptual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student defines branches of internal iliac artery	LO	defines	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student names valves of the heart	LO	names	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student names tributaries of inferior vena cava	LO	names	cognitive	Factual	Remember	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student demonstrates on cadavers outflow of blood from individual organs.	LO	demonstrates	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student describes arteries according to the internationally recognized anatomical terminology (PNA) using the human anatomical preparations.	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student describes human anatomical preparation according to the internationally recognized anatomical terminology (PNA) of the heart.	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student describes describe the venous system according to the internationally recognized anatomical terminology (PNA) using the human anatomical preparations.	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student demonstrates on cadavers vasculature of individual organs.	LO	demonstrates	cognitive	Procedural	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	MU
Student explains the difference between vasa privata and vasa publica.	LO	explain	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains the function of arterio-venous anastomoses and "perforans-vessels".	LO	explain	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains the openening and closing mechanisms of heart valves.	LO	explain	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains the self excitation of the heart on organ, cell- and molecular level.	LO	explain	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains the structure and function of the cardial circulatory system	LO	explain	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student describes the specifics of the localization of the heart within the pericard and the thorax.	LO	describe	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains body-, lung-, and portal circulation.	LO	explain	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains localization and structure of different blood vessels and lymph channels.	LO	explain	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains the classification of the circulatory system.	LO	explain	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains the structure of the heart and pericard.	LO	explain	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains the supply areas of the coronary vessels and their variants.	LO	explain	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UAU
Student explains Vein projections and findings at head level	LO	explains	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student explains Vascular projections and findings at head level	LO	explains	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes the main components of the venous system of the head and neck	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student describes the main components of the arterial system of the head and neck	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student explains the imaging of spontaneous intracranial/intracerebral hemorrhage	LO	explains	cognitive	Procedural	Understand	Cardiovascular system (A07)	Nervous system (A08)	UMF
Student characterizes venous drainage of the lower limb	LO	characterizes	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student characterizes arterial anastomoses of the neck	LO	characterizes	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student characterizes venous anastomoses of the neck	LO	characterizes	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student characterizes function of subclavian a.	LO	characterizes	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student describes systemic and pulmonary circulation	LO	describes	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student explains relationship between Bracial a. and another structures	LO	explains	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student explains cardiac conduction systym	LO	explains	cognitive	Conceptual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student characterizes branches of abdominal aorta	LO	characterizes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student describes arteries and veins of human body	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student describes blood supply and innervation of the heart	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student describes arterial blood supply of the head and the neck	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student describes parts of subclavian artery	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student describes venous drainage of the neck	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student describes groups of brain veins	LO	describes	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student is able to explain systemic and pulmonary circulation	LO	explains	cognitive	Factual	Understand	Cardiovascular system (A07)	Cardiovascular system (A07)	UPJS
Student is able to check the arterial pulse in the lower limb	LO	check	skills			Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student is able to Check the arterial pulse in the upper limb	LO	check	skills			Cardiovascular system (A07)	Cardiovascular system (A07)	UMF
Student analyzes blood cells under the microscope and explains the characteristics and functions.	LO	analyze	cognitive	Procedural	Analyze	Cells (A11)	Cells (A11)	UAU
Student identifies organelles and components of the cytoscelett and explain structure and function.	LO	identify	cognitive	Conceptual	Apply	Cells (A11)	Cells (A11)	UAU

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes structural characteristics and functions of different cells and identify them in a microscopic preparation.	LO	describe, identify	cognitive	Procedural	Apply	Cells (A11)	Cells (A11)	UAU
Student explains principles of necrosis and identify necrotic cells under a microscope.	LO	explain	cognitive	Procedural	Apply	Cells (A11)	Cells (A11)	UAU
Student explains mitosis and meiosis and identify the stages in a microscopic preparation	LO	explain, identify	cognitive	Procedural	Apply	Cells (A11)	Cells (A11)	UAU
Student identifies the main stages that take place within the spermatogenesis	LO	identifies	cognitive	Factual	Apply	Cells (A11)	Urogenital system (A05)	UMF
Student identifies the main numerical and structural anomalies of the chromosomes	LO	identifies	cognitive	Factual	Apply	Cells (A11)	Embryonic system (A16)	UMF
Student names the particularities of diffuse axonal lesions	LO	names	cognitive	Factual	Remember	Cells (A11)	Nervous system (A08)	UMF
Student describes the molecular and cellular components of the humoral and cellular immune system and explains its function.	LO	describe	cognitive	Conceptual	Understand	Cells (A11)	Hemic and immune system (A15)	UAU
Student explains functions, molecular basics and control of the cell differentiation.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Cells (A11)	UAU
Student explains how information is transported within and between cells.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Cells (A11)	UAU
Student explains mechanism and regulation of apoptosis	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Cells (A11)	UAU
Student explains mechanisms of electro- and pharmacomechanic linking.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Cells (A11)	UAU
Student explains principles of polarity, barrier functions, and epithelial transport.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Tissues (A10)	UAU
Student explains structure and function of basal membranes.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Tissues (A10)	UAU
Student explains the classification, strcutural and functional characteristics, and the localization of immune cells in the blood, connective tissue, and organs.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Hemic and immune system (A15)	UAU
Student explains the function of specific cell types and epithelia of the respiratory tract.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Respiratory system (A04)	UAU
Student explains the relevance of apoptosis	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Cells (A11)	UAU
Student explains the relevance of clonal selection and deletion for the differentiation of foreign vs. self.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Hemic and immune system (A15)	UAU
Student explains the structure and functions of a human cell.	LO	explain	cognitive	Conceptual	Understand	Cells (A11)	Cells (A11)	UAU
Student describes the role ofembryonal and adult stem cells in different organ systems.	LO	describe	cognitive	Factual	Understand	Cells (A11)	Embryonic system (A16)	UAU
Student describes different types of cell deaths.	LO	describe	cognitive	Factual	Understand	Cells (A11)	Not applicable	UAU
Student explains stages and regulations of the cell cycle.	LO	explain	cognitive	Factual	Understand	Cells (A11)	Cells (A11)	UAU
Student explains structural and molecular basics of cellular migration, epithel-mesenchym-interaction and cell differentiation.	LO	explain	cognitive	Factual	Understand	Cells (A11)	Embryonic system (A16)	UAU

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains the development, differentiation, regulation of blood cells, and development and roles of relevant organs for this process.	LO	explain	cognitive	Factual	Understand	Cells (A11)	Hemic and immune system (A15)	UAU
Student explains the structure of the conduction systems and differentiate their cells from sceletal muscles in miscroscopic preparation.	LO	differentiate	cognitive	Procedural	Understand	Cells (A11)	Nervous system (A08)	UAU
Student describes structure and function of nephron	LO	describes	cognitive	Conceptual	Understand	Cells (A11)	Urogenital system (A05)	UPJS
Student distinguishes between organs of the gastro-intestinal tract based on structural and functional charcteristics of specific cell types.	LO	distinguish	cognitive	Conceptual	Analyze	Digestive system (A03)	Digestive system (A03)	UAU
Student is able to anatomically explore the organs that take part in forming the digestive system (in situ and extracted from the body)	LO	explore	cognitive	Procedural	Analyze	Digestive system (A03)	Digestive system (A03)	UMF
Student identifies digestive organs on radiological method images.	LO	identifies	cognitive	Procedural	Apply	Digestive system (A03)	Digestive system (A03)	MU
Student identifies the projection lines of the organs of the digestive system on the thoracoabdominal wall	LO	identifies	cognitive	Conceptual	Apply	Digestive system (A03)	Digestive system (A03)	UMF
Student defines the digestive system according to the internationally recognized anatomical terminology (PNA).	LO	defines	cognitive	Factual	Remember	Digestive system (A03)	Digestive system (A03)	MU
Student names all the organs of the digestive system and explain their morphology, basic structure and function.	LO	names	cognitive	Factual	Remember	Digestive system (A03)	Digestive system (A03)	MU
Student defines anatomical structures of digestive system	LO	defines	cognitive	Factual	Remember	Digestive system (A03)	Digestive system (A03)	UPJS
Student summarizes the knowledge of the digestive system and assess correlation with other systems.	LO	summarizes	cognitive	Conceptual	Understand	Digestive system (A03)	Digestive system (A03)	MU
Student describes digestive organs on radiological method images.	LO	describes	cognitive	Procedural	Understand	Digestive system (A03)	Digestive system (A03)	MU
Student describes the structural components and mechanisms of defecation and continence.	LO	describe	cognitive	Conceptual	Understand	Digestive system (A03)	Digestive system (A03)	UAU
Student explains structure and function of the digestive system.	LO	explain	cognitive	Conceptual	Understand	Digestive system (A03)	Digestive system (A03)	UAU
Student explains the perintoneal structures of different intestinal derivates and resulting cavities and recessi.	LO	explain	cognitive	Factual	Understand	Digestive system (A03)	Digestive system (A03)	UAU
Student explains the structure of gastro-intestinal tract with pancreas, liver, gall bladder and their functions.	LO	explain	cognitive	Factual	Understand	Digestive system (A03)	Digestive system (A03)	UAU
Student explains the structure of the digestive system.	LO	explain	cognitive	Factual	Understand	Digestive system (A03)	Digestive system (A03)	UAU
Student describes the main components of the upper digestive system	LO	describes	cognitive	Factual	Understand	Digestive system (A03)	Digestive system (A03)	UMF
Student characterizes organs of digestive system	LO	characterizes	cognitive	Factual	Understand	Digestive system (A03)	Digestive system (A03)	UPJS
Student describes blood supply and innervation of particular parts of digestive system	LO	describes	cognitive	Factual	Understand	Digestive system (A03)	Digestive system (A03)	UPJS
Student describes blood supply and lymphatic drainage of rectum	LO	describes	cognitive	Factual	Understand	Digestive system (A03)	Digestive system (A03)	UPJS

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student identifies the main anomalies that result from the disruption of the processes involved in the development of the pharyngeal system	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Stomatognathic system (A14)	UMF
Student identifies the main processes that take place during the third week of development	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Embryonic system (A16)	UMF
Student identifies the main anomalies resulting from the disruption of the processes that take place during the third week	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Embryonic system (A16)	UMF
Student identifies the main anomalies resulting from the disturbance of the morpho-functional dynamics of the embryo-fetal attachments.	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Embryonic system (A16)	UMF
Student identifies the main anomalies that result from the disruption of the processes involved in the development of the limbs and spine.	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Musculoskeletal system (A02)	UMF
Student identifies the main anomalies resulting from the disruption of the processes involved in the development of the neurocranium	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Musculoskeletal system (A02)	UMF
Student identifies of the main anomalies resulting from the disruption of the processes involved in the development of viscerocranium	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Musculoskeletal system (A02)	UMF
Student identifies the main anomalies resulting from the disruption of the processes involved in the development of the respiratory system	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Respiratory system (A04)	UMF
Student identifies the main anomalies resulting from the disruption of the processes involved in the development of the cardiovascular system	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Cardiovascular system (A07)	UMF
Student identifies the main anomalies that result from the disruption of the processes involved in the development of the digestive system	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Digestive system (A03)	UMF
Student identifies the main anomalies resulting from the disruption of the processes involved in the development of the urinary system	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Urogenital system (A05)	UMF
Student identifies the main anomalies resulting from the disruption of the processes involved in the development of the genital system	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Urogenital system (A05)	UMF
Student identifies the main developmental abnormalities arising from the disturbance of the morphogenesis of the central nervous system	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Nervous system (A08)	UMF
Student identifies the main embryo-fetal attachments and explaining their role	LO	identifies	cognitive	Conceptual	Apply	Embryonic system (A16)	Embryonic system (A16)	UMF
Student identifies the main stages and processes involved in the development of the pharyngeal system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Stomatognathic system (A14)	UMF
Student identifies the main stages and processes involved in the development of the upper respiratory system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Respiratory system (A04)	UMF
Student identifies the main stages and processes involved in the development of the upper digestive system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Digestive system (A03)	UMF
Student identifies the main structures derived from the three germinal layers	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Embryonic system (A16)	UMF
Student identifies the main changes that occur during the fetal period	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Embryonic system (A16)	UMF
Student identifies the main stages and processes involved in the development of the limbs and spine	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Musculoskeletal system (A02)	UMF
Student identifies the main stages and processes involved in the development of the neurocranium system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Musculoskeletal system (A02)	UMF

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student identifies the main stages and processes involved in the development of viscerocranium	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Musculoskeletal system (A02)	UMF
Student identifies the main stages and processes involved in the development of the respiratory system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Respiratory system (A04)	UMF
Student identifies the main stages and processes involved in the development of the cardiovascular system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Cardiovascular system (A07)	UMF
Student identifies the main stages and processes involved in the development of the digestive system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Digestive system (A03)	UMF
Student identifies the main stages and processes involved in the development of the urinary system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Urogenital system (A05)	UMF
Student identifies the main stages and processes involved in the development of the male and female genital system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Urogenital system (A05)	UMF
Student identifies the main stages and processes involved in the morphogenesis of the central nervous system	LO	identifies	cognitive	Factual	Apply	Embryonic system (A16)	Nervous system (A08)	UMF
Student explains the development of organs, organ systems, cavities, somatic parts, and their differentiation and deduces the topography.	LO	deduct	cognitive	Conceptual	Evaluate	Embryonic system (A16)	Embryonic system (A16)	UAU
Student knows stages of development of the human embryo, structure and function of the fetal membranes and placenta, stages of development of individual organs and the impact of harmful factors on the development of the embryo and fetus (teratogenic)	LO	knows	cognitive	Conceptual	Remember	Embryonic system (A16)	Embryonic system (A16)	JU
Student describes fetal circulation (identify structures before and after birth).	LO	describes	cognitive	Factual	Understand	Embryonic system (A16)	Embryonic system (A16)	MU
Student explains gastrulation and neurolation, the metamerisazion and the development of the body through folding.	LO	explain	cognitive	Conceptual	Understand	Embryonic system (A16)	Embryonic system (A16)	UAU
Student explains molecular an cellular processes of conception, cleavage division, implantation and placentation.	LO	explain	cognitive	Conceptual	Understand	Embryonic system (A16)	Embryonic system (A16)	UAU
Student explains pregnancy, birth, breast feeding including maternal and fetal control mechanisms.	LO	explain	cognitive	Conceptual	Understand	Embryonic system (A16)	Urogenital system (A05)	UAU
Student explains the fetal circulation, the transformation into an adult circulation and rudiments of fetal circulation.	LO	explain	cognitive	Conceptual	Understand	Embryonic system (A16)	Cardiovascular system (A07)	UAU
Student describes the development of an embryo.	LO	describe	cognitive	Factual	Understand	Embryonic system (A16)	Embryonic system (A16)	UAU
Student explains the characteristics of the development of the kidney, urinary tract system and internal and external genitalia.	LO	explain	cognitive	Factual	Understand	Embryonic system (A16)	Embryonic system (A16)	UAU
Student explains the development of the organism and develop a timeline.	LO	explain	cognitive	Factual	Understand	Embryonic system (A16)	Embryonic system (A16)	UAU
Student explains the embryonal development from germ cells to a body and develop a timeline.	LO	explain	cognitive	Factual	Understand	Embryonic system (A16)	Embryonic system (A16)	UAU
Student explains the proliferation of cells into tissues and organs in the context of embryonal development and organogenesis.	LO	explain	cognitive	Factual	Understand	Embryonic system (A16)	Embryonic system (A16)	UAU
Student describes the main stages and processes involved in the morphogenesis of the endocrine system at the neck	LO	describes	cognitive	Conceptual	Understand	Embryonic system (A16)	Endocrine system (A06)	UMF
Student describes the main processes that take place during the first week of development	LO	describes	cognitive	Conceptual	Understand	Embryonic system (A16)	Embryonic system (A16)	UMF

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes the main processes that take place during the second week of development	LO	describes	cognitive	Conceptual	Understand	Embryonic system (A16)	Embryonic system (A16)	UMF
Student describes the main anomalies that result from the disruption of the processes that take place during the first and second week.	LO	describes	cognitive	Conceptual	Understand	Embryonic system (A16)	Embryonic system (A16)	UMF
Student describes the main anomalies that result from the disruption of the processes that occur during weeks 4 to 8 and during the fetal period	LO	describes	cognitive	Conceptual	Understand	Embryonic system (A16)	Embryonic system (A16)	UMF
Student explains the processes of craniocaudal and laterolateral folding	LO	explains	cognitive	Conceptual	Understand	Embryonic system (A16)	Embryonic system (A16)	UMF
Student identifies individual endocrine glands according to the internationally recognized anatomical terminology (PNA).	LO	identifies	cognitive	Factual	Apply	Endocrine system (A06)	Endocrine system (A06)	MU
Student identifies individual anatomical structures of the endocrine system on human anatomical preparations.	LO	identifies	cognitive	Factual	Apply	Endocrine system (A06)	Endocrine system (A06)	MU
Student uses theoretical knowledge to be oriented about the placement of the endocrine glands and indicate their placement in individual topographic regions.	LO	uses	cognitive	Factual	Apply	Endocrine system (A06)	Endocrine system (A06)	MU
Student identifies and explores the main components of the endocrine system (trunk level	LO	identifies	cognitive	Factual	Apply	Endocrine system (A06)	Endocrine system (A06)	UMF
Student assesses mutual topographic relations between the endocrine system and other anatomic structures.	LO	assesses	cognitive	Conceptual	Evaluate	Endocrine system (A06)	Endocrine system (A06)	MU
Student explains the structure of the endocrine and neuroendocrine systems and deduce their topograhy from their development.	LO	deduct	cognitive	Conceptual	Evaluate	Endocrine system (A06)	Endocrine system (A06)	UAU
Student defines individual endocrine glands according to the internationally recognized anatomical terminology (PNA).	LO	defines	cognitive	Factual	Remember	Endocrine system (A06)	Endocrine system (A06)	MU
Student defines the excretory system according to the international anatomical terminology (PNA).	LO	defines	cognitive	Factual	Remember	Endocrine system (A06)	Endocrine system (A06)	MU
Student names all organs of the excretory system and explain their morphology, basic structure, blood supply, innervation, and basic function.	LO	names	cognitive	Factual	Remember	Endocrine system (A06)	Endocrine system (A06)	MU
Student names Cushing triad	LO	names	cognitive	Factual	Remember	Endocrine system (A06)	Endocrine system (A06)	UMF
Student characterizes mutual topographic relations between the endocrine system and other anatomic structures.	LO	characterizes	cognitive	Conceptual	Understand	Endocrine system (A06)	Endocrine system (A06)	MU
Student explains the importance of the endocrine system, its basic function, shape, placement in the body, blood supply and innervation	LO	explains	cognitive	Conceptual	Understand	Endocrine system (A06)	Endocrine system (A06)	MU
Student summarizes all the knowledge of the excretory system and assess relation with other systems.	LO	summarizes	cognitive	Conceptual	Understand	Endocrine system (A06)	Endocrine system (A06)	MU
Student is able to associate the ultrastructure of hormonproducing cells to their funtion.	LO	associate (relate)	cognitive	Conceptual	Understand	Endocrine system (A06)	Endocrine system (A06)	UAU
Student explains structure, function, and regulation of the hypothalamus-hypophysis-organ axes.	LO	explain	cognitive	Conceptual	Understand	Endocrine system (A06)	Endocrine system (A06)	UAU
Student explains principles of the autocrine, paracrine, and endocrine regulation and neurotransmission.	LO	explain	cognitive	Factual	Understand	Endocrine system (A06)	Nervous system (A08)	UAU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains the structure of different glands and principles of secretion.	LO	explain	cognitive	Factual	Understand	Endocrine system (A06)	Endocrine system (A06)	UAU
Student explains the main components of the endocrine system at the neck	LO	explains	cognitive	Factual	Understand	Endocrine system (A06)	Endocrine system (A06)	UMF
Student describes glands of endocrine system and their anatomical structure and function	LO	describes	cognitive	Conceptual	Understand	Endocrine system (A06)	Endocrine system (A06)	UPJS
Student names the mechanisms for resorption and secretion and the pathways of water as well as the most relevant iones and molecules along the tubular system and explian their regulation.	LO	name	cognitive	Conceptual	Remember	Fluids and secretions (A12)	Urogenital system (A05)	UAU
Student names the treatment options for hydrocephalus	LO	names	cognitive	Factual	Remember	Fluids and secretions (A12)	Nervous system (A08)	UMF
Student names the particularities of subdural hematoma	LO	names	cognitive	Factual	Remember	Fluids and secretions (A12)	Nervous system (A08)	UMF
Student names the particularities of extradural hematoma	LO	names	cognitive	Factual	Remember	Fluids and secretions (A12)	Nervous system (A08)	UMF
Student describes the composition of the blood and explain its functions.	LO	describe	cognitive	Conceptual	Understand	Fluids and secretions (A12)	Fluids and secretions (A12)	UAU
Student explains synthesis, functions and drainage of the lacrimal fluid.	LO	explain	cognitive	Conceptual	Understand	Fluids and secretions (A12)	Fluids and secretions (A12)	UAU
Student is able to anatomically explore and explain the lymphatic drainage of the upper limb	LO	explore	cognitive	Procedural	Analyze	Hemic and immune system (A15)	Hemic and immune system (A15)	UMF
Student identifies the lymphatic system on human anatomical preparations according to the internationally valid anatomical terminology (PNA)	LO	identifies	cognitive	Factual	Apply	Hemic and immune system (A15)	Hemic and immune system (A15)	MU
Student formulates normal structure of the lymphatic system.	LO	formulates	cognitive	Factual	Create	Hemic and immune system (A15)	Hemic and immune system (A15)	MU
Student defines the lymphatic system on human anatomical preparations according to the internationally valid anatomical terminology (PNA).	LO	defines	cognitive	Factual	Remember	Hemic and immune system (A15)	Hemic and immune system (A15)	MU
Student knows the blood supply and innervation.	LO	knows	cognitive	Factual	Remember	Hemic and immune system (A15)	Hemic and immune system (A15)	MU
Student knows the blood supply and innervation, basic structure and function.	LO	knows	cognitive	Factual	Remember	Hemic and immune system (A15)	Cardiovascular system (A07)	MU
Student names all parts of the lymphatic system.	LO	names	cognitive	Factual	Remember	Hemic and immune system (A15)	Hemic and immune system (A15)	MU
Student names lymph vessels of upper limb	LO	names	cognitive	Factual	Remember	Hemic and immune system (A15)	Hemic and immune system (A15)	UPJS

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes topographic mutual relations between the lymphatic system and other systems.	LO	describes	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	MU
Student describes the lymphatic system on human anatomical preparations according to the internationally valid anatomical terminology (PNA).	LO	describes	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	MU
Student explains basic morphology and function of all parts of the lymphatic system.	LO	explains	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	MU
Student explains how the immune system reacts to noxes.	LO	explain	cognitive	Conceptual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UAU
Student explains structure and functions of the bone marrow and the thymus as primary lymphatic organs.	LO	explain	cognitive	Conceptual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UAU
Student explains structure and functions of the lymphatic organs.	LO	explain	cognitive	Conceptual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UAU
Student explains the functions of macrophages, granulocytes, and mast cells.	LO	explain	cognitive	Conceptual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UAU
Student explains the mechanisms of the congenital immune system to eliminate noxa.	LO	explain	cognitive	Conceptual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UAU
Student explains the mechanisms with which the adaptive immune system reacts to germs.	LO	explain	cognitive	Conceptual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UAU
Student explains the presentation of antigenes and their relevance for the immune reaction.	LO	explain	cognitive	Conceptual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UAU
Student describes the development of the variety of antibodies and T-cell-receptors.	LO	describe	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UAU
Student explains the components of the blood and its synthesis.	LO	explain	cognitive	Factual	Understand	Hemic and immune system (A15)	Fluids and secretions (A12)	UAU
Student explains building, composition, and drainage of peri- and endolymph.	LO	explain	cognitive	Factual	Understand	Hemic and immune system (A15)	Fluids and secretions (A12)	UAU
Student describes the main components of the lymphatic system of the head and neck	LO	describes	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UMF

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains lymphatic drainage of head and neck viscera	LO	explains	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UMF
Student explains the lymphatic drainage of the lower limb	LO	explains	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UMF
Student characterizes lymphatic drainage of the lower limb	LO	characterizes	cognitive	Conceptual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UPJS
Student describes lymphatic drainage of the head and the neck	LO	describes	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UPJS
Student explains lymphatic drainage of the heart	LO	explains	cognitive	Factual	Understand	Hemic and immune system (A15)	Hemic and immune system (A15)	UPJS
Student distinguishes dermal types and regional, gender-, and age-specific characteristics of the skin.	LO	distinguish	cognitive	Factual	Analyze	Integumentary System (A17)	Integumentary System (A17)	UAU
Student names all layers of the skin (and its derivatives).	LO	names	cognitive	Factual	Remember	Integumentary System (A17)	Integumentary System (A17)	MU
Student defines parts of skin	LO	defines	cognitive	Factual	Remember	Integumentary System (A17)	Integumentary System (A17)	UPJS
Student defines types of hair	LO	defines	cognitive	Factual	Remember	Integumentary System (A17)	Integumentary System (A17)	UPJS
Student describes skin according to the internationally recognized anatomical terminology (PNA).	LO	describes	cognitive	Factual	Understand	Integumentary System (A17)	Integumentary System (A17)	MU
Student explains morphology of all layers of the skin (and its derivatives).	LO	explains	cognitive	Factual	Understand	Integumentary System (A17)	Integumentary System (A17)	MU
Student explains structure and function of the skin and adnexes.	LO	explain	cognitive	Conceptual	Understand	Integumentary System (A17)	Integumentary System (A17)	UAU
Student characterizes function, blood supply, innervation and lymph drainage of mammary gland	LO	characterizes	cognitive	Conceptual	Understand	Integumentary System (A17)	Integumentary System (A17)	UPJS
Student describes appendages of skin	LO	describes	cognitive	Factual	Understand	Integumentary System (A17)	Integumentary System (A17)	UPJS
Student analyzes anatomical identification and exploration of the main components of the motor systems	LO	analyzes	cognitive	Factual	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student analyzes Anatomical and imagistic exploration of the bones of the free upper limb and of the upper limb belt	LO	analyzes	cognitive	Procedural	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student analyzes Anatomical and imagistic exploration of the joints of the free upper limb and of the upper limb belt	LO	analyzes	cognitive	Procedural	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student analyzes Anatomical and imagistic exploration of the lower limb belt and of the bones of the free lower limb	LO	analyzes	cognitive	Procedural	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student analyzes Anatomical and imagistic exploration of the joints of the free lower limb and of the lower limb belt	LO	analyzes	cognitive	Procedural	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student is able to Anatomically explore the rib cage; identifying the general and particular characters of the ribs; the description of the sternum.	LO	explore	cognitive	Procedural	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student distinguishes types of fractures in lower limb extremity	LO	distinguishes	cognitive	Conceptual	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student distinguishes types of fractures in particular parts of upper limb	LO	distinguishes	cognitive	Conceptual	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student distinguishes muscles of upper limb	LO	distinguishes	cognitive	Factual	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student distinguishes spaces of upper limb	LO	distinguishes	cognitive	Factual	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student distinguishes bones of pelvic girdle, bones of free lower limb and bones of foot	LO	distinguishes	cognitive	Factual	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student distinguishes fascias and muscles of lower limb	LO	distinguishes	cognitive	Factual	Analyze	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student identifies each joint (in accordance with internationally recognized Latin terminology PNA).	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student identifies appropriate muscles on anatomical specimens.	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student identifies skeleton structures including detailed relief using internationally acknowledged anatomical terminology (PNA) on anatomical specimens.	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student identifies individual joint structures in radiological methods.	LO	identifies	cognitive	Procedural	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student identifies individual muscle and groups of muscles on radiological method images.	LO	identifies	cognitive	Procedural	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student identifies bones and their structures on radiological method images.	LO	identifies	cognitive	Procedural	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student applies notions to a case of disk herniation	LO	applies	cognitive	Conceptual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies the main structures of resistance of the skull and explanation of the fracture path at this level	LO	identifies	cognitive	Conceptual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies the main pits and cavities in the skull	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies the main muscle groups at the level of the head and neck	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies the main anatomotopographic regions of the upper limb	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Body regions (A01)	UMF
Student identifies the main anatomotopographic regions of the lower limb	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Body regions (A01)	UMF
Student identifies The anatomical details of the joints of the free upper limb and of the upper limb belt	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies The anatomical details of the bones forming the lower limb belt and the free lower limb.	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student identifies The anatomical details of the joints of the lower limb belt and of the free lower limb.	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies The anatomical details of the musculofascial complexes of the upper limb belt.	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies The anatomical details of the musculofascial complexes of the free upper limb.	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies The anatomical details of the musculofacial complexes of the lower limb belt	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies The anatomical details of the musculofacial complexes of the free lower limb	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies The anatomical details of the musculofacial complexes of the back	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies The anatomical details of the musculofacial complexes of the thorax	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student identifies The anatomical details of the complex muscles of the abdomen	LO	identifies	cognitive	Factual	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student masters Anatomical exploration and identification of the bones that make up the neurocranium	LO	masters	cognitive	Procedural	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student masters Anatomical exploration and identification of the bones that make up the viscerocranium	LO	masters	cognitive	Procedural	Apply	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student formulates function of lower limb and ligaments	LO	formulates	cognitive	Conceptual	Create	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student defines basic concepts of the general myology.	LO	defines	cognitive	Conceptual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student defines basic concepts of general osteology.	LO	defines	cognitive	Conceptual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student defines the range of movement in each joint.	LO	defines	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student names the particularities of cranial fractures	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student names the causes for radicular and medular compression	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student names the stages of spine involvement of trauma	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student names the types of spine fractures	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student names therapeutic possibilities in various types of vertebro-medular trauma	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student names he clinical picture of disk herniation	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student names the phases of discopathy	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student names the surgical indication in disk herniation	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Nervous system (A08)	UMF

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student knows function of ligaments	LO	knows	cognitive	Conceptual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student knows function of joints	LO	knows	cognitive	Conceptual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student knows function of lower limb	LO	knows	cognitive	Conceptual	Remember	Musculoskeletal system (A02)	Body regions (A01)	UPJS
Student defines myotome	LO	defines	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student masters range of motion in particular joints of upper limb	LO	masters	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student names facsias and muscles of lower limb	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student names ligaments, joints and curvatures of vertebral column	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student names muscles of urinary bladder and urethra	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Urogenital system (A05)	UPJS
Student names bones of skull	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student names and describes cervical vertebrae	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student names and describe neurocranium bones	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student names muscles of the neck	LO	names	cognitive	Factual	Remember	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student characterizes movements provided with individual muscles.	LO	characterizes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student describes connection of bones a divide them into synarthrosis and diarthrosis.	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student describes each joint (in accordance with internationally recognized Latin terminology PNA).	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student describes individual muscles of the human body using the internationally recognized anatomical terminology (PNA).	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student describes on each muscle its origin, insertion, innervation and function.	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student describes skeleton structures including detailed relief using internationally acknowledged anatomical terminology (PNA) on anatomical specimens.	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	MU
Student describes structure and function of the scull.	LO	describe	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student describes the interaction of muscles, tendons, and bones of a joint with underlying mechanics.	LO	describe	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains differences of structure and contraction mechanisms of muscular cell types.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Cells (A11)	UAU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains form, localization, and functions of different types of bones, cartilages, syn-/diarthroses, sceletal muscles and additional components.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains specifics of different joints in terms of localization, structure, axes, functions, and range of movement.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains specifics of the osseous and cartilaginous sceleton and their functions.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the function and regulation of the outer and inner eye muscles and of the lid muscles.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Sense organs (A09)	UAU
Student explains the function of the mimic muscles.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the function of the sceletal muscles.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the function of the tympal muscles and the drainage of peri- and endolymph.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the functional muscle groups and the functions of muscle chains as well as agonists and antagonists in different movements.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the ossification processes and bone growth.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the strcuture and function of the extremities.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Body regions (A01)	UAU
Student explains the structural and functional principles of the musculosceletal system.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the structures and processes for movement including movement planning.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Nervous system (A08)	UAU
Student explains the topography, innervation, and function of the different muscles.	LO	explain	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student describes the regulation and principles of bone rebuilding.	LO	describe	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the regulation of force development.	LO	explain	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the structure and principles of the musculosceletal system.	LO	explain	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the underlying biomechanical structures of power transmission of muscular activity.	LO	explain	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student explains the structure of specific components of active and passive musculosceletal system.	LO	explain	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UAU
Student describes the appearance of the skull in general according to the norms of the skull	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student describes the clinical picture of vertebral instability	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student describes the principles of vertebral instability treatment	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains the biomechanics of the spine	LO	explains	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student describes the main muscle groups at the level of the head and neck	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student describes the main conjunctival spaces at the level of the head and neck	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student describes the anatomy of disk/bony landmarks/nerve root complex	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Nervous system (A08)	UMF
Student describes imaging aspects in vertebral instability	LO	describes	cognitive	Procedural	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student describes imaging aspects in vertebro-medular trauma	LO	describes	cognitive	Procedural	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student characterizes types of movement	LO	characterizes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student characterizes paralysis of facial muscles	LO	characterizes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Nervous system (A08)	UPJS
Student classifies all connection of lower limb	LO	classifies	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student classifies bones	LO	classifies	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student classifies joints	LO	classifies	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes function of motor unit	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes compartment syndrome	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes carpal tunnel syndrome	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes function of rotator cuff	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes function of cervical vertebrae joints	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes function of particular muscles of the head	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes function of particular muscles of the neck	LO	describes	cognitive	Conceptual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student characterizes types of muscles	LO	characterizes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student characterizes connection of bones	LO	characterizes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student characterizes vessels and nerves of bone	LO	characterizes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes joint of pelvic girdle and joints free lower limb	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes joints of the ribs	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes ossification of cranial bones	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes defomities and sutures of skull	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Musculoskeletal system (A02)	UPJS
Student describes types of muscles of the head	LO	describes	cognitive	Factual	Understand	Musculoskeletal system (A02)	Body regions (A01)	UPJS
Student applies The skill of counting the ribs	LO	applies	skills			Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student analyzes Acquiring the skill of counting vertebrae	LO	analyzes	skills			Musculoskeletal system (A02)	Musculoskeletal system (A02)	UMF
Student analyzes anatomical, sectional and imaging exploration of the diencephalon	LO	analyzes	cognitive	Conceptual	Analyze	Nervous system (A08)	Nervous system (A08)	UMF
Student analyzes anatomical, sectional and imaging exploration of the cerebral hemispheres	LO	analyzes	cognitive	Conceptual	Analyze	Nervous system (A08)	Nervous system (A08)	UMF
Student analyzes anatomical identification and exploration of the cranial meninges with the identification of prolongations and spaces	LO	analyzes	cognitive	Factual	Analyze	Nervous system (A08)	Nervous system (A08)	UMF
Student analyzes anatomical identification and exploration of the main components of the autonomic nervous system	LO	analyzes	cognitive	Factual	Analyze	Nervous system (A08)	Nervous system (A08)	UMF
Student is able to anatomically explore and identify the trunks, cords and branches of the brachial plexus	LO	explore	cognitive	Procedural	Analyze	Nervous system (A08)	Nervous system (A08)	UMF
Student analyzes function of Branchial plexus	LO	analyzes	cognitive	Conceptual	Analyze	Nervous system (A08)	Nervous system (A08)	UPJS
Student analyzes function of Lumbar and Sacral plexus	LO	analyzes	cognitive	Conceptual	Analyze	Nervous system (A08)	Nervous system (A08)	UPJS
Student analyzes anatomical structures and parts of brain	LO	analyzes	cognitive	Factual	Analyze	Nervous system (A08)	Nervous system (A08)	UPJS
Student distinguishes the division of reticular formation	LO	distinguishes	cognitive	Factual	Analyze	Nervous system (A08)	Nervous system (A08)	UPJS
Student uses the acquired knowledge to be oriented about the placement of individual organs of the nervous system.	LO	uses	cognitive	Conceptual	Apply	Nervous system (A08)	Nervous system (A08)	MU
Student identifies the peripheral nervous system according to the internationally recognized anatomical terminology (PNA).	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	MU
Student identifies the individual anatomical structures of the peripheral nervous system on human anatomical preparations.	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	MU
Student applies notions in differentiating between various causes of consciousness loss	LO	applies	cognitive	Conceptual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student applies knowledge to a real neurosurgical case	LO	applies	cognitive	Conceptual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student identifies the branches of the lumbar plexus	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student identifies the branches of the sacral plexus	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student identifies the main nerve plexuses innervating the thoracic and abdominal-pelvic viscera	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student identifies the main components of the sympathetic paravertebral chain	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student identifies the main neural stations of the posterior and anterolateral cord systems	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student identifies the prolongations and spaces of the spinal cord	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student identifies the main nuclear groups in the brainstem	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student identifies the main circuits in the cerebellum and describes them	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student is able to identify and describe the main nuclear groups at the diencephalon level	LO	identify, describe	cognitive	Factual	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student applies ICH principles to particular clinical case	LO	applies	cognitive	Procedural	Apply	Nervous system (A08)	Nervous system (A08)	UMF
Student identifies nerves of muscles	LO	identifies	cognitive	Factual	Apply	Nervous system (A08)	Musculoskeletal system (A02)	UPJS
Student constructs 3 clinical cases with vertebro-medular trauma localized at various levels within the spine	LO	constructs	cognitive	Conceptual	Create	Nervous system (A08)	Nervous system (A08)	UMF
Student formulates a clinical case based on the type of cerebral tumor and its localization	LO	formulates	cognitive	Conceptual	Create	Nervous system (A08)	Nervous system (A08)	UMF
Student knows innervation area for each peripheral nerve.	LO	knows	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	MU
Student names the anatomy of the cerebral ventricular system	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the causes and the clinical symptoms of hydrocephalus	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the types of intracranial expansive processes	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the causes of consciousness loss	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the phases of consciousness loss and defines coma	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the elements of Glasgow Coma Scale	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the diagnostic criteria for brain death	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the types of brain lesions that can be produced by trauma	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the particularities of EPS syndrome	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the particularities of IPS syndrome	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UMF

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student names the stages of neurologic clinical exam	LO	names	cognitive	Procedural	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student names the central nervous system structures that need to be evaluated in the exam	LO	names	cognitive	Procedural	Remember	Nervous system (A08)	Nervous system (A08)	UMF
Student is able to name and describe function the most important antonomic plexuses of the body	LO	names	cognitive	Conceptual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student names spinal cervical nerves and their function	LO	names	cognitive	Conceptual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student names cranial nerves and their function	LO	names	cognitive	Conceptual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student names disorders of basal ganglia	LO	names	cognitive	Conceptual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student defines branches of spinal nerve	LO	defines	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student defines dermatome	LO	defines	cognitive	Factual	Remember	Nervous system (A08)	Integumentary System (A17)	UPJS
Student defines parasympathetic system and ganglions	LO	defines	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student defines parts and development of Rhomboid fossa	LO	defines	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student defines tracts of cerebellum	LO	defines	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student defines anatomical classification of basal ganglia	LO	defines	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student defines functional cortical areas of telencephalon	LO	defines	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student defines deep structures and white matter of telencephalon	LO	defines	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student names nerves of Branchial plexus	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student names nerves of Lumbar and Sacral plexus	LO	names	cognitive	Factual	Remember	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes the topographic mutual relations between the nervous system and other anatomic structures.	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	MU
Student characterizes mutual topographic relationships between the peripheral nervous system and other anatomic structures.	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	MU
Student characterizes the progress and structure of anatomical formations of peripheral nerves.	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	MU
Student explains the importance of individual parts of the peripheral nervous system.	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	MU
Student demonstrates cranial nerves emerging from the brain stem and placement of peripheral nerves in various topographic regions.	LO	demonstrates	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	MU
Student describes the central nervous system according to the internationally recognized anatomical terminology (PNA).	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	MU

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes the peripheral nervous system according to the internationally recognized anatomical terminology (PNA).	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	MU
Student describes information processing of pain.	LO	describe	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student describes structure and function of the meninges and the sinus durae matris.	LO	describe	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains categorization, core areas, fiber qualities and functions and innervation areas of cranial nerves.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains differences in the representation of body regions in the motor and somatosensoric cortex.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains differences of innervation of muscle groups of the torso and extremities.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains localization, structure, function, and innervation of receptors of the protopathic and epicritic sensibility.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains mechanisms of signal transmission and information processing of the soamtosensoric in the different nervous pathways, core areas and the telencephal cortex.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains receptors and information processing of the viscero-sensorics in the different neural pathways, core areas, the spinal cord and the brain	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains relevant structurures and processes for reflexes.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure and function of the cranial nerves and the relevance of bridging veins.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure and function of the different types of nerve tissues and assign them to the different parts of the central and peripheral nervous system.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Tissues (A10)	UAU
Student explains structure and function of the epidural space and the bone marrow.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure and function of the nervous system, the sensory organs and associated scull structures.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure and function of the neuro- and viscerocranium and associated cavities.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Musculoskeletal system (A02)	UAU
Student explains structure and function of the subarachnoid space, liquor production and composition and liquorrhea.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure and function of the vegetative nervous system.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure and functions of the vegetative nervous system and higher vegetative central parts in the brain.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure, function, and localization of synapses.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structures and processes relevant for balance and proprioreception.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Sense organs (A09)	UAU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains the mechanism of stimulus conduction.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains the mechanisms of development and conduction of spikes and electric transmission.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Cells (A11)	UAU
Student explains the motor function of the gastro-intestinal tract and ist regulation by the vegetative and enteric nervous system.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Digestive system (A03)	UAU
Student explains the pathway, components and functions of the most important fiber pathway systems in the central nervous system.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains the plexus building, innervation area and functions of the peripheral nerves.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains the structure and function of the different parts of the central and peripheral nervous system.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains the structure and function of the memory.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains the structure of the brain and bone marrow and assign core areay and functions to the different parts.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains category principles of the nervous system and subtypes of the peripheral system.	LO	explain	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structures relevant for movement planning, coordination and implementation in the central and peripheral nervous system.	LO	explain	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains the spinal and supraspinal connectivity of the reflexes.	LO	explain	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains the structure of the hippocampus and its interactions for the development of the short- and longterm memory.	LO	explain	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure and innervation area of the spinal nerves.	LO	explain	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains structure of peripheral nerves and ganglions.	LO	explain	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student explains the blodd supply, innervation, and lympathic flow of organs.	LO	explain	cognitive	Factual	Understand	Nervous system (A08)	Cardiovascular system (A07)	UAU
Student explains the topography and structure of the regio olfactoria, the fila olfactoria, the bulbus and the nervus olfactorius.	LO	explain	cognitive	Factual	Understand	Nervous system (A08)	Sense organs (A09)	UAU
Student explains the topography of nerves.	LO	explain	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student is able to localize the different structures of the brain, the cranial nerves, blood vessels, meninges and subarachnoidal spaces in the scull.	LO	localize	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UAU
Student characterizes the particularities of history taking and narrative medicine in neurosurgery	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student classifies the cranio-cerebral trauma based on GCS and ames the follow-up criteria	LO	classifies	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student describes attitude in the face of a subarachnoid hemorrhage	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes clinical and imaging aspects in ischemic cerebral diseases	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student describes the neurovascular projections and dissections in the upper limbs	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Cardiovascular system (A07)	UMF
Student describes the neurovascular projections and dissections in the lower limbs	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Cardiovascular system (A07)	UMF
Student explains the physiology of intracranial pressure	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains cerebral herniation	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the physiology of CSF circulation	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the brain-expansive process interaction	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the types of cerebral tumors based on their nature and localization	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the phisiology of consciousness	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the particularities of brain/skull interaction physics in head impact	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the particularities of polytrauma involving brain trauma	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the physiology of spinal cord in trauma	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the theories and levels of organization of the central nervous system	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student describes the Hakim-Adams triad	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the circulation of the cerebrospinal fluid	LO	explains	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the anatomical description and exploration of the main components of the cervical plexus and the cervical sympathetic trunk	LO	explains	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the anatomical description and exploration of the cranial nerves	LO	explains	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student demonstrates nervous projections and discoveries in the head	LO	demonstrates	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student describes imaging aspects in spinal degenerative diseases	LO	describes	cognitive	Procedural	Understand	Nervous system (A08)	Musculoskeletal system (A02)	UMF
Student explains the imaging aspects in cranio-cerebral trauma	LO	explains	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains brain trauma guidelines (pre-ICU, adults, children)	LO	explains	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UMF

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains imaging aspects in medulara and radicular compression	LO	explains	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the principles of radicular compression syndrome management	LO	explains	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the anatomical, sectional and imaging exploration of the spinal cord	LO	explains	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the anatomical, sectional and imaging exploration of the brainstem	LO	explains	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student explains the anatomical, sectional and imagistic exploration of the cerebellum	LO	explains	cognitive	Procedural	Understand	Nervous system (A08)	Nervous system (A08)	UMF
Student characterizes central and peripheral nervous system	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes function, innervation and blood supply of mediastinum structures	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Cardiovascular system (A07)	UPJS
Student characterizes function of cranial nerves I.-VII.	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes function of cranial nerves VIII.-XII	LO	characterizes	cognitive	Conceptual	Understand	nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes function of cervical plexus	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes function of sympathetic trunk	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes anatomical structure and function of spinal cord	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes different types of nerve tracts	LO	characterizes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student classifies central nervous system and function	LO	classifies	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes function of sympathetic trunk, autonomic nervous system, thoracic ganglia	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes function of autonomic nervous system	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes sympathetic and parasympathetic part of autonomic nervous system	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes function of reticular formation in medulla oblongata	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes function of reticular formation	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes function of cerebellum	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student is able to describe functional anatomy of cerebellum	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes function of diencephalon	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes limbic system	LO	describes	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student explains function of somatic nerves of posterior abdominal wall	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student explains function of meninges	LO	explains	cognitive	Conceptual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes nervous tracts of brainstem	LO	characterizes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes borders of midbrain	LO	characterizes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes division of midbrain	LO	characterizes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes internal structure of tectum, cerebral crus and tegmentum mesencephali	LO	characterizes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes morphological division of cerebellum	LO	characterizes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes main divisions of diencephalon	LO	characterizes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes parts of telencephalon	LO	characterizes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student characterizes and distinguishes parts of cerebrospinal fluid system	LO	characterizes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes sensory and motor innervation of Lower Limb	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes innervation of upper limb structures	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes innervation of lower limb structures	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes cranial nerves and axons	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes sensory, motor and autonomic nerves of the head and the neck	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes innervation of tongue	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Stomatognathic system (A14)	UPJS
Student describes anatomical structure and function of neuron	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes division of brain	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes distribution of white and gray matter	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes anatomical structure of medulla oblongata, pon and fossa rhomboidea	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes external features and internal structure of pons	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes efferent connections from reticular formation	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes external and internal structure of diencephalon	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes autonomic nerves of abdominal wall	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student describes venous sinuses of the dura mater	LO	describes	cognitive	Factual	Understand	Nervous system (A08)	Nervous system (A08)	UPJS
Student practises the maneuvers to explore the peritoneal cavity, its compartments its serous formations	LO	practises	skills			Nervous system (A08)	Digestive system (A03)	UMF
Student is able to use of spoken and written anatomical, histological and embryological nomenclature	LO	use	cognitive	Factual	Apply	Not applicable	Not applicable	JU
Student is able to use objective sources of information	LO	use	cognitive	Procedural	Apply	Not applicable	Not applicable	JU
Student is able to use anatomical nomenclature	LO	use	cognitive	Conceptual	Apply	Not applicable	Not applicable	UPJS
Student is able to use terminology	LO	use	cognitive	Conceptual	Apply	Not applicable	Not applicable	UPJS
Student knows anatomical, histological and embryological nomenclature in Polish and English	LO	knows	cognitive	Factual	Remember	Not applicable		JU
Student names the principles of treatment	LO	names	cognitive	Conceptual	Remember	Not applicable	Not applicable	UMF
Student names basic image characteristics for CT	LO	names	cognitive	Procedural	Remember	Not applicable	Not applicable	UMF
Student names basic image characteristics for essential MRI modalities (T1, T2, FLAIR, contrast)	LO	names	cognitive	Procedural	Remember	Not applicable	Not applicable	UMF
Student explains the importance of different structures.	LO	explains	cognitive	Conceptual	Understand	Not applicable	Not applicable	MU
Student explains the importance of the system.	LO	explains	cognitive	Conceptual	Understand	Not applicable	Not applicable	MU
Student explains the biopsychosocial model of the development of health and illness.	LO	explain	cognitive	Conceptual	Understand	Not applicable	Not applicable	UAU
Student explains the clinical and topographical diagnosis	LO	explains	cognitive	Conceptual	Understand	Not applicable	Body regions (A01)	UMF
Student explains the clinical examination of the comatous patient	LO	explains	cognitive	Conceptual	Understand	Not applicable	Nervous system (A08)	UMF
Student is able to formulate opinions on various aspects of professional activity	LO	formulate	affective			Not applicable	Not applicable	JU
Student is able to implement of the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment	LO	implement	affective			Not applicable	Not applicable	JU
Student is able to perceive and recognize one's own limitations and self-assessing educational deficits and needs	LO	recognize, perceive	affective			Not applicable	Not applicable	JU
Student is able to take the responsibility related to decisions taken as part of professional activities, including terms of self and other people's safety	LO	take responsibility	affective			Not applicable	Not applicable	JU

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student is able to Anatomically explore the organs of the respiratory system (both in situ and extracted from the body	LO	explore	cognitive	Procedural	Analyze	Respiratory system (A04)	Respiratory system (A04)	UMF
Student identifies the pleuro-pulmonary projection line on the chest wall	LO	identifies	cognitive	Conceptual	Apply	Respiratory system (A04)	Respiratory system (A04)	UMF
Student defines the respiratory system according to the internationally recognized anatomical terminology (PNA).	LO	defines	cognitive	Factual	Remember	Respiratory system (A04)	Respiratory system (A04)	MU
Student names all organs of the respiratory system.	LO	names	cognitive	Factual	Remember	Respiratory system (A04)	Respiratory system (A04)	MU
Student names cartilages, ligaments and cavities of respiratory system	LO	names	cognitive	Factual	Remember	Respiratory system (A04)	Respiratory system (A04)	UPJS
Student summarizes all the knowledge of the respiratory system and assess interaction with other systems.	LO	summarizes	cognitive	Conceptual	Understand	Respiratory system (A04)	Respiratory system (A04)	MU
Student explains morphology of all organs of the respiratory system.	LO	explains	cognitive	Factual	Understand	Respiratory system (A04)	Respiratory system (A04)	MU
Student explains mechnisms of cleaning, warming, and moistening of tidal air.	LO	explain	cognitive	Conceptual	Understand	Respiratory system (A04)	Respiratory system (A04)	UAU
Student explains the mechanisms of positional change, opening/closing of the larynx when breathing, coughing and pressing.	LO	explain	cognitive	Conceptual	Understand	Respiratory system (A04)	Stomatognathic system (A14)	UAU
Student explains the principles of breathing mechanics.	LO	explain	cognitive	Conceptual	Understand	Respiratory system (A04)	Respiratory system (A04)	UAU
Student explains the structure and function of the respiratory tract.	LO	explain	cognitive	Conceptual	Understand	Respiratory system (A04)	Respiratory system (A04)	UAU
Student explains structural components and principles of the pulmonary circulation and ist (local) regulation.	LO	explain	cognitive	Factual	Understand	Respiratory system (A04)	Respiratory system (A04)	UAU
Student explains the structure and development of the lower respiratory sections, the lung, the pleura, and structures relevant for breathing.	LO	explain	cognitive	Factual	Understand	Respiratory system (A04)	Respiratory system (A04)	UAU
Student explains the structure and development of the upper respiratory tract, associated cavities and their connections.	LO	explain	cognitive	Factual	Understand	Respiratory system (A04)	Respiratory system (A04)	UAU
Student explains the structure of the viscerocranium and of the respiratory tract.	LO	explain	cognitive	Factual	Understand	Respiratory system (A04)	Musculoskeletal system (A02)	UAU
Student describes the main components of the upper respiratory system	LO	describes	cognitive	Factual	Understand	Respiratory system (A04)	Respiratory system (A04)	UMF
Student characterizes function of diaphragm	LO	characterizes	cognitive	Conceptual	Understand	Respiratory system (A04)	Musculoskeletal system (A02)	UPJS
Student describes movement of the ribs and sternum during breathing	LO	describes	cognitive	Conceptual	Understand	Respiratory system (A04)	Musculoskeletal system (A02)	UPJS
Student describes clinical tips of respiratory obstruction	LO	describes	cognitive	Conceptual	Understand	Respiratory system (A04)	Respiratory system (A04)	UPJS
Student describes anatomical structures of upper respiratory tract	LO	describes	cognitive	Factual	Understand	Respiratory system (A04)	Respiratory system (A04)	UPJS
Student describes anatomical structures of lower respiratory tract	LO	describes	cognitive	Factual	Understand	Respiratory system (A04)	Respiratory system (A04)	UPJS

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains borders of lung and pleura	LO	explains	cognitive	Factual	Understand	Respiratory system (A04)	Respiratory system (A04)	UPJS
Student distinguishes functionally and macroscopically: regio respiratoria and regio olfactoria.	LO	distinguishes	cognitive	Factual	Analyze	Sense organs (A09)	Sense organs (A09)	MU
Student analyzes anatomical identification and exploration of the main components of the visual system	LO	analyzes	cognitive	Factual	Analyze	Sense organs (A09)	Sense organs (A09)	UMF
Student analyzes anatomical identification and exploration of the main components of the acoustic-vestibular	LO	analyzes	cognitive	Factual	Analyze	Sense organs (A09)	Sense organs (A09)	UMF
Student analyzes anatomical identification and exploration of the main components of the taste system	LO	analyzes	cognitive	Factual	Analyze	Sense organs (A09)	Sense organs (A09)	UMF
Student analyzes anatomical identification and exploration of the main components of the olfactory system	LO	analyzes	cognitive	Factual	Analyze	Sense organs (A09)	Sense organs (A09)	UMF
Student identifies the gustatory system according to the internationally recognized anatomical terminology (PNA).	LO	identifies	cognitive	Factual	Apply	Sense organs (A09)	Sense organs (A09)	MU
Student identifies the olfactory system according to the internationally recognized anatomical terminology (PNA).	LO	identifies	cognitive	Factual	Apply	Sense organs (A09)	Sense organs (A09)	MU
Student identifies the vestibular and auditory system according to the internationally recognized anatomical terminology (PNA) (structure and placement of utriculus, sacculus, macula statica, canales et ductus semicirculares, cristae ampullares, neurons and structure of the cranial nerve VIII).	LO	identifies	cognitive	Factual	Apply	Sense organs (A09)	Sense organs (A09)	MU
Student identifies individual anatomical structures of the ear on human anatomical preparations.	LO	identifies	cognitive	Factual	Apply	Sense organs (A09)	Sense organs (A09)	MU
Student uses the acquired theoretical knowledge to be oriented about the placement of the eye.	LO	uses	cognitive	Factual	Apply	Sense organs (A09)	Sense organs (A09)	MU
Student knows about the normal anatomic rations of different ear structures and evaluate them on X-rays.	LO	knows	cognitive	Procedural	Apply	Sense organs (A09)	Sense organs (A09)	MU
Student names and describe function of accessory organs of eye	LO	names	cognitive	Conceptual	Remember	Sense organs (A09)	Sense organs (A09)	UPJS
Student defines blood supply and innervation of nasal cavity	LO	defines	cognitive	Factual	Remember	Sense organs (A09)	Cardiovascular system (A07)	UPJS
Student characterizes the importance of the gustatory system.	LO	characterizes	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student characterizes the importance of the olfactory system	LO	characterizes	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student characterizes the importance of the vestibular system.	LO	characterizes	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student characterizes the importance of anatomical formations of the ear.	LO	characterizes	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student characterizes the mutual topographic relationships between the eye and other anatomical structures.	LO	characterizes	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student demonstrates placement of the gustatory system within the topographical relationship with neighbouring organs.	LO	demonstrates	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	MU

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student demonstrates placement of the olfactory system within the topographical relationship with neighbouring organs.	LO	demonstrates	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student demonstrates placement of the vestibular system within the topographical relationship with neighbouring organs.	LO	demonstrates	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student demonstrates placement of individual parts of the ear in various topographic regions.	LO	demonstrates	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student describes the gustatory system according to the internationally recognized anatomical terminology (PNA).	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student describes the olfactory system according to the internationally recognized anatomical terminology (PNA).	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student describes the vestibular and auditory system according to the internationally recognized anatomical terminology (PNA) (structure and placement of utriculus, sacculus, macula statica, canales et ductus semicirculares, cristae ampullares, neurons and structure of the cranial nerve VIII).	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student describes the sensory organ eye according to the internationally recognized anatomical terminology (PNA).	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	MU
Student describes the information processing in the cortiorgan, auditory system and telecephal cortex to an auditive sensory.	LO	describe	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student describes the information processing in the retina, visual system and telecephal cortex.	LO	describe	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains characteristics and functions of the dioptric system.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains localization, structure, function, and innervation of taste buds.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains localization, structure, function, innervation and signal transduction of nozireceptors.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains mechanisms of signal transduction and information processing in the vestibular organs.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains mechanisms of signal transmission and information processing in the taste buds, associated fiber pathways and the telecephal cortex.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Nervous system (A08)	UAU
Student explains relevant structures and processes for hearing.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains relevant structures and processes for nociception and pain.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains relevant structures and processes for sensory functions of the skin.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	sense organs (A09)	UAU
Student explains relevant structures and processes for smelling.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	sense organs (A09)	UAU
Student explains relevant structures and processes for taste.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	sense organs (A09)	UAU
Student explains relevant structures and processes for the topic organization of sensory systems and motor function.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Nervous system (A08)	UAU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains relevant structures and processes for vision.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains structure and function of the outer-, middle- and inner ear and associated structures.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains the importance of active sensory perception for the child's physical, psychological and linguistic development.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Not applicable	UAU
Student explains the mechanisms of signal transmission and information processing in the regio olfactoria, the olfactory system and the telecephal cortex.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Nervous system (A08)	UAU
Student explains the structure of the bulbus oculi and the eye, especially the retina and cornea and describe their specific functions.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains topography, structure, function, and innervation of the vistublar organ and relevant structures for proprioreception.	LO	explain	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student is able to differentiate between noziception and pain and explain components of pain reaction.	LO	differentiate	cognitive	Factual	Understand	Sense organs (A09)	Nervous system (A08)	UAU
Student explains the basiscs of optics.	LO	explain	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student explains structure, blood and nerval supply of the orbita and ist structures and the eyelids.	LO	explain	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	UAU
Student is able to characterize strabismus	LO	characterizes	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student describes visual pathway	LO	describes	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student describes vestibular pathway	LO	describes	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student explains function of auditory organs	LO	explains	cognitive	Conceptual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student characterizes layers of auditory and vestibular apparatus	LO	characterizes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student describes lines and compartments of orbital cavity	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student describes olfactory system	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student describes anatomical structure and layers of eyeball	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student describes blood supply and innervation of auditory and vestubular apparatus	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Nervous system (A08)	UPJS
Student describes auditory pathway	LO	describes	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student explains blood supply and innervation of orbit	LO	explains	cognitive	Factual	Understand	Sense organs (A09)	Sense organs (A09)	UPJS
Student characterizes parotideomasseteric region	LO	characterizes	cognitive	Factual	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UPJS

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student distinguishes types of teeth	LO	distinguishes	cognitive	Factual	Analyze	Stomatognathic system (A14)	Stomatognathic system (A14)	UPJS
Student identifies pharyngeal device derivatives	LO	identifies	cognitive	Factual	Apply	Stomatognathic system (A14)	Stomatognathic system (A14)	UMF
Student names the particularities of dilaceration	LO	names	cognitive	Factual	Remember	Stomatognathic system (A14)	Stomatognathic system (A14)	UMF
Student defines anatomical structures of oral cavity	LO	defines	cognitive	Factual	Remember	Stomatognathic system (A14)	Stomatognathic system (A14)	UPJS
Student names ligaments, movements, blood suply and innervation of temporomandibular joint	LO	names	cognitive	Factual	Remember	Stomatognathic system (A14)	Musculoskeletal system (A02)	UPJS
Student explains the mechanisms of phonation and articulation.	LO	explain	cognitive	Conceptual	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UAU
Student explains the process of chewing and swallowing and their deliberate and autonomous control.	LO	explain	cognitive	Conceptual	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UAU
Student explains the development of the teeth, the timing of dentation and differences between the set of teeth in children and adults.	LO	explain	cognitive	Factual	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UAU
Student explains structure of mouth, teeth, base of the mouth, tongue, gums, and pharynx.	LO	explain	cognitive	Factual	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UAU
Student explains the mandible, hyoid, pharynx, and larynx.	LO	explain	cognitive	Factual	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UAU
Student explains the structure and characteristics of the innervation of the salivary gland.	LO	explain	cognitive	Factual	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UAU
Student demonstrates throat projections and discoveries	LO	demonstrates	cognitive	Procedural	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UMF
Student describes function of temporomandibular joint	LO	describes	cognitive	Conceptual	Understand	Stomatognathic system (A14)	Stomatognathic system (A14)	UPJS
Student distinguishes deep, middle and superficial layers of thoracic wall	LO	distinguishes	cognitive	Factual	Analyze	Tissues (A10)	Musculoskeletal system (A02)	UPJS
Student identifies projections and dissecting the walls of the trunk	LO	identifies	cognitive	Conceptual	Apply	Tissues (A10)	Body regions (A01)	UMF
Student identifies inner, middle and outer layer of vessels	LO	identifies	cognitive	Factual	Apply	Tissues (A10)	Cardiovascular system (A07)	UPJS
Student explains structure of tissue and their localization, differentiate these from each other and deduce characteristics and functions.	LO	deduct	cognitive	Conceptual	Evaluate	Tissues (A10)	Tissues (A10)	UAU
Student explains the basics of synthesis and secretion mechanisms of the extracellular matrix components and deduce characteristics of connective and supporting tissue from their composition.	LO	deduct	cognitive	Conceptual	Evaluate	Tissues (A10)	Tissues (A10)	UAU
Student explains the structure of organs, differentiate them in a microscopic preparation and deduce their characteristics and functions.	LO	deduct	cognitive	Conceptual	Evaluate	Tissues (A10)	Tissues (A10)	UAU
Student defines walls of pelvis	LO	defines	cognitive	Factual	Remember	Tissues (A10)	Musculoskeletal system (A02)	UPJS

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student defines layers of the heart wall	LO	defines	cognitive	Factual	Remember	Tissues (A10)	Cardiovascular system (A07)	UPJS
Student defines groups of abdominal wall muscles	LO	defines	cognitive	Factual	Remember	Tissues (A10)	Musculoskeletal system (A02)	UPJS
Student defines fascias of abdominal wall	LO	defines	cognitive	Factual	Remember	Tissues (A10)	Musculoskeletal system (A02)	UPJS
Student names layers of thoracic wall	LO	names	cognitive	Factual	Remember	Tissues (A10)	Musculoskeletal system (A02)	UPJS
Student is able to assign different connective and supporting tissue types to organ systems and to the active and passive musculosceletal system.	LO	assign (relate)	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student is able to assign different muscular tissues to the active and passive musculosceletal system.	LO	assign (relate)	cognitive	Conceptual	Understand	Tissues (A10)	Musculoskeletal system (A02)	UAU
Student is able to assign different types of epithelia to different organ systems.	LO	assign (relate)	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student describes components and functions of extraxcellular matrix.	LO	describe	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student explains function and structure of the torso wall.	LO	explain	cognitive	Conceptual	Understand	Tissues (A10)	Musculoskeletal system (A02)	UAU
Student explains principles of structure and mineralization processes of dental tissues.	LO	explain	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student explains structure and function of epithelialcomplexes and communicaation contacts.	LO	explain	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student explains surface differentiation of different epithelia and their functions.	LO	explain	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student explains the compartimentation by structures of connecting tissue and their function.	LO	explain	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student explains the function of connective tissue as shifting structure of the inner compartment of nerves, tendons, and muscles.	LO	explain	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student explains the role of the white fat as an external isolation.	LO	explain	cognitive	Conceptual	Understand	Tissues (A10)	Tissues (A10)	UAU
Student explains the proliferation of cells in tissues.	LO	explain	cognitive	Factual	Understand	Tissues (A10)	Cells (A11)	UAU
Student explains the cavities and connecting tissue cavities with leading structures in thorax, abdomen, and pelvis.	LO	explain	cognitive	Factual	Understand	Tissues (A10)	Body regions (A01)	UAU
Student explains the topography and cavities of the head and of the connecting tissue of the neck.	LO	explain	cognitive	Factual	Understand	Tissues (A10)	Body regions (A01)	UAU
Student explains development, differentiation, categorization, composition, and function of nerve tissues and differentiate these in a microscopic preparation.	LO	explain	cognitive	Procedural	Understand	Tissues (A10)	Nervous system (A08)	UAU
Student explains development, differentiation, categorization, structure and functions of surface and glandular epithelia and differentiate these in a microscopic preparation.	LO	explain	cognitive	Procedural	Understand	Tissues (A10)	Endocrine system (A06)	UAU
Student explains the development, differentiation, categorization, composition, and function of connective and supporting tissue and differentiate these in a microscopic preparation.	LO	explain	cognitive	Procedural	Understand	Tissues (A10)	Tissues (A10)	UAU

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student explains the development, differentiation, categorization, composition, and function of muscular tissue and differentiate these in a microscopic preparation.	LO	explain	cognitive	Procedural	Understand	Tissues (A10)	Tissues (A10)	UAU
Student describes projections and dissecting the walls of the trunk	LO	describes	cognitive	Conceptual	Understand	Tissues (A10)	Musculoskeletal system (A02)	UMF
Student describes the projections of the weak spots of the abdominal wall	LO	describes	cognitive	Conceptual	Understand	Tissues (A10)	Musculoskeletal system (A02)	UMF
Student describes structure of muscle	LO	describes	cognitive	Factual	Understand	Tissues (A10)	Musculoskeletal system (A02)	UPJS
Student describes structure of tendon	LO	describes	cognitive	Factual	Understand	Tissues (A10)	Musculoskeletal system (A02)	UPJS
Student describes the structure of spinal nerve	LO	describes	cognitive	Factual	Understand	Tissues (A10)	Nervous system (A08)	UPJS
Student explains structure of bones	LO	explains	cognitive	Factual	Understand	Tissues (A10)	Musculoskeletal system (A02)	UPJS
Student is able to anatomically explore the organs that take part in forming the urinary system (both in situ and extracted from the body)	LO	explore	cognitive	Procedural	Analyze	Urogenital system (A05)	Urogenital system (A05)	UMF
Student is able to o Anatomically explore the organs that make up the genital system (both in situ and extracted from the body)	LO	explore	cognitive	Procedural	Analyze	Urogenital system (A05)	Urogenital system (A05)	UMF
Student analyzes gender differences of pelvis	LO	analyzes	cognitive	Conceptual	Analyze	Urogenital system (A05)	Urogenital system (A05)	UPJS
Student distinguishes internal and external male genital organs	LO	distinguishes	cognitive	Factual	Analyze	Urogenital system (A05)	Urogenital system (A05)	UPJS
Student distinguishes internal and external female genital organs	LO	distinguishes	cognitive	Factual	Analyze	Urogenital system (A05)	Urogenital system (A05)	UPJS
Student identifies the projection lines of the organs of the urinary system on the abdominal wall	LO	identifies	cognitive	Conceptual	Apply	Urogenital system (A05)	Urogenital system (A05)	UMF
Student identifies the main stages that take place within ovogenesis	LO	identifies	cognitive	Factual	Apply	Urogenital system (A05)	Urogenital system (A05)	UMF
Student defines the female reproductive system according to the internationally recognized anatomical terminology (PNA).	LO	defines	cognitive	Factual	Remember	Urogenital system (A05)	Urogenital system (A05)	MU
Student defines the male reproductive system according to the internationally recognized anatomical terminology (PNA).	LO	defines	cognitive	Factual	Remember	Urogenital system (A05)	Urogenital system (A05)	MU
Student names all the organs of the female reproductive system.	LO	names	cognitive	Factual	Remember	Urogenital system (A05)	Urogenital system (A05)	MU
Student names all the organs of the male reproductive system.	LO	names	cognitive	Factual	Remember	Urogenital system (A05)	Urogenital system (A05)	MU
Student knows the skills necessary for the exploration of the pelvis, visceral lodges and their contents. Exploration of the pelvis subperitoneal space	LO	knows	cognitive	Procedural	Remember	Urogenital system (A05)	Body regions (A01)	UMF
Student describes the mutual topographical relationships of individual organs.	LO	describes	cognitive	Conceptual	Understand	Urogenital system (A05)	Body regions (A01)	MU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student summarizes all knowledge of the female reproductive system.	LO	summarizes	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	MU
Student summarizes all knowledge about the male genital system.	LO	summarizes	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	MU
Student explains morphology, basic structure, and function of female reproductive system.	LO	explains	cognitive	Factual	Understand	Urogenital system (A05)	Urogenital system (A05)	MU
Student explains morphology, basic structure, and function of the male reproductive system.	LO	explains	cognitive	Factual	Understand	Urogenital system (A05)	Urogenital system (A05)	MU
Student describes the function of the accessory male sexual glands and the components of the ejaculate.	LO	describe	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student describes the mechanisms of sexual arrousal and the regulation of erection and orgasm.	LO	describe	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student describes the ovarial and menstrual cycle including consequences for other reproductive organs.	LO	describe	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student describes the process of micturition and bladder obstruction for the continence.	LO	describe	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains categorization and functions of the sexual organs.	LO	explain	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains development, structure and function of the placenta.	LO	explain	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains mechanisms and regulation of primary urine production in the glomerulus.	LO	explain	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains similarities and specific differences between the sexual organs of men and women.	LO	explain	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains the mechanisms and the relevance of the kidney for the clearance of substances and long-term blood pressure regulation.	LO	explain	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains the similarities and differences of the male and female gametogenesis.	LO	explain	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains the structure and functions of the kidney and the efferent urinary tract system.	LO	explain	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains structure and characteristics of the development of external and internal sexual organs and the inguinal canal.	LO	explain	cognitive	Factual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains the gametogenesis and the gender-specific determination.	LO	explain	cognitive	Factual	Understand	Urogenital system (A05)	Embryonic system (A16)	UAU
Student explains the human reproduction.	LO	explain	cognitive	Factual	Understand	Urogenital system (A05)	Embryonic system (A16)	UAU
Student explains the structure of the kidney and the efferent urinary tract system.	LO	explain	cognitive	Factual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains the structure of the sexual organs.	LO	explain	cognitive	Factual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student explains the topography and the micro- and macroscopic structure of the kidney and urinary tract system.	LO	explain	cognitive	Factual	Understand	Urogenital system (A05)	Urogenital system (A05)	UAU
Student describes organs of urinary system and their structure and function	LO	describes	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UPJS

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
Student describes organs of male genital system and their structure and function	LO	describes	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UPJS
Student describes organs of female genital system and their structure and function	LO	describes	cognitive	Conceptual	Understand	Urogenital system (A05)	Urogenital system (A05)	UPJS
Student explains blood supply, innervation and funtion of particular parts of respiratory system	LO	explains	cognitive	Conceptual	Understand	Urogenital system (A05)	Respiratory system (A04)	UPJS
Student describes blood supply and innervation of unirary system organs	LO	describes	cognitive	Factual	Understand	Urogenital system (A05)	Urogenital system (A05)	UPJS
Student describes transplantation of kidney	LO	describes	cognitive	Procedural	Understand	Urogenital system (A05)	Urogenital system (A05)	UPJS
Student explains regulatory processes and applies regulatory principles.	LO	apply	cognitive	Conceptual	Apply		Not applicable	UAU
Student applies knowledge to real cases images	LO	applies	cognitive	Procedural	Apply		Not applicable	UMF
Student describes and solves exemplary clinical problem related to topography.	LO	describe, solves	cognitive	Conceptual	Create		Not applicable	UAU
Student knows the basic physics and indication of imaging modalities (CT, MRI)	LO	knows	cognitive	Conceptual	Remember		Not applicable	UMF
Student knows neurosurgical semiology	LO	knows	cognitive	Factual	Remember		Not applicable	UMF
Student explains body structure and essential processes and consider gender-, age-, and culture-related aspects.	LO	explain	cognitive	Conceptual	Understand		Not applicable	UAU
Student explains changes in the body during pregnancy, birth and breast feeding.	LO	explain	cognitive	Conceptual	Understand		Not applicable	UAU
Student explains differential influences on structures, functions, experience, and behavior.	LO	explain	cognitive	Conceptual	Understand		Not applicable	UAU
Student explains the mechanics of inflexible and flexible bodies.	LO	explain	cognitive	Conceptual	Understand			UAU
Student is able to get a system overview.	LO	get overview	cognitive	Conceptual	Understand		Not applicable	UAU
Student is able to practise their skills	LO	practise	skills				Not applicable	UPJS
The learning unit is focused on spinal structure, i.e. characteristic of the vertebrae and differencies in vertebrae forming different parts of the spine, structure of the occipital and parietal bone and connections within the spine and between spine and skull. It will be complemented by the study of spine mobility as well as its primary and secondary curvatures. The theoretical knowledge, gained during self-study, will be evaluated during the work with anatomical specimens.	Description					Musculoskeletal system (A02)		JU
The class is dedicated to gaining the knowledge of the the detailed structure of the temporal, frontal, ethmoidal and sphenoid bone. It includes studies of the anatomy of all parts of the above mentioned bones, their localization in the skull and function. Students self-study will be broadened and evaluated by the study of the anatomical specimens.	Description					Musculoskeletal system (A02)		JU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
The Unit is focused on the development of bones and joints of human body, including axial skeleton with neurocranium, skeleton of limbs and viscerocranium. The lecture is illustrated by several examples of malformations as well as anatomical and patomorphological specimens.	Description					Musculoskeletal system (A02)	Embryonic system (A16)	JU
The Unit is focused on bones forming viscerocranium and temporomandibular joint. The laboratory practice and work with anatomical specimens serve broadening and evaluating students theoretical knowledge, gained during self-study.	Description					Musculoskeletal system (A02)		JU
The Unit is focused on the structure, content and communication of anterior, middle and posterior cranial fossa The lecture and presented illustrations enable understanding of the material.	Description					Musculoskeletal system (A02)		JU
The Unit is dedicated to the topographical and functional anatomy of the skeleton of the upper limb, including its girdle and free part. Students gain knowledge during self-study, which is further evaluated and broadened by the work with anatomical specimens.	Description					Musculoskeletal system (A02)		JU
The Unit familiarizes students with topographical and functional anatomy of the pelvis, hip joint and the femur. The theoretical knowlegde, gained by students during self-study, will be evaluated and broadened by the work with anatomical specimens.	Description					Musculoskeletal system (A02)		JU
The Unit familiarizes students with the development of the central nervous system and basic malformations. It is realized in a form of a lecture.	Description					Nervous system (A08)	Embryonic system (A16)	JU
The Unit is dedicated to the topographical and functional anatomy of the bones and joints forming skeleton of the lower leg and foot. Students gain the theoretical knowledge by the self-study. During laboratory class they work with real anatomical specimens, which allows to evaluate and broaden the theory.	Description					Musculoskeletal system (A02)		JU
The Unit familiarizes students with the X-rays, CT and MRI of the osteoarticular system and appearance of different structures in these exams. It completes and expands the practical classes and enables linking between theoretical knowledge and radiological exams.	Description					Musculoskeletal system (A02)		JU
The Unit familiarizes students on the development of the head and neck, with special focus on the development of branchial arches. It is realized in a form of a lecture.	Description					Embryonic system (A16)		JU
The Unit familiarizes students with general anatomy of the central nervous system, including rules of the nomenclature and function of different structures. It is conducted as an interactive class.	Description					Nervous system (A08)		JU
The Unit is focused on the external and internal anatomy of the brain stem (medulla oblongata, pons and midbrain) and cerebellum. It is completed by studying of the structure of the 4th ventricle. Students theoretical knowledge, gained by the self-study, will be evaluated and broadened by the work with anatomical specimens.	Description					Nervous system (A08)		JU

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
During this Unit students familiarize themselves with the external and internal structure of the diencephalon, including thalamus, epithalamus, metathalamus, subthalamus and hypothalamus. The Unit is completed by learning about the anatomy of the third ventricle. Students gain the theoretical knowledge by self-study. It will be further evaluated and broadened by the work with anatomical specimens.	Description					Nervous system (A08)		JU
The Unit introduces the main tracts of the central nervous system and possible pathology. It is realized in a form of a lecture.	Description					Nervous system (A08)		JU
During this Unit students will familiarize themselves with the external and internal structure of the telencephalon, including brain hemispheres and lateral ventricles. Moreover, the Unit summarize information about the circulation of the cerebrospinal fluid. Students' theoretical knowledge, gained during self-study, will be further evaluated and broadened by the work with anatomical specimens.	Description					Nervous system (A08)		JU
The Unit is focused on anatomical aspects of the central nervous vasculature, its variants and possible diseases. The class is realized in a form of a lecture.	Description					Nervous system (A08)		JU
The Unit familiarize students with a structural and topographical anatomy of the neck, including its regions, musculature, thyroid and parathyroid gland and nerve structures. Students' theoretical knowledge, gained during self study will be evaluated and broadened by the work with anatomical specimens.	Description					Body regions (A01)		JU
The Unit familiarizes students with the anatomy of neck arterial and venous system and part of the cervical peripheral nervous system (cervical portion of sympathetic trunk). Students theoretical knowledge, gained during self-study, will be further evaluated and broadened by the work with anatomical specimens.	Description					Cardiovascular system (A07)	Nervous system (A08)	JU
The Unit familiarizes students with the detailed anatomy each part of the organ of hearing and balance	Description					Sense organs (A09)		JU
The Unit is focused on the anatomy of the vestibulocochlear organ, its vascularization and innervation. The class is realized in a form of a lecture.	Description					Sense organs (A09)		JU
During the class students familiarize themselves with the anatomy of the oral and nasal cavity, paranasal sinuses, larynx, pharynx and two cranial nerves: optic and trigeminal. Students' theoretical knowledge, gained during self-study, will be evaluated and broadened by the work with anatomical specimens.	Description					Stomatognathic system (A14)	Nervous system (A08)	JU
During the interactive class (seminar) students familiarizes themselves with the anatomy, topography and function of eye and accessory organs of eye. Preparation to the class requires the self-study and gaining basic theoretical knowlegde.	Description					Sense organs (A09)		JU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
The Unit familiarizes students with the processes of the development of the heart and main parts of the circulatory system. It is realized in a form of a lecture.	Description					Cardiovascular system (A07)		JU
The Unit is focused on recognition of anatomical structures on images from such imaging modalities as X-rays, CT and MRI. The class is conducted in a seminar form and is highly interactive with students. The prerequisites are theoretical knowledge and participation in practical classes from the dedicated subject.	Description					Body regions (A01)		JU
The Unit familiarizes students with the anatomy of the mimic muscles, facial artery and facial nerve. Students theoretical knowledge, gained during self-study, will be further broadened and evaluated by the work with anatomical specimens.	Description					Stomatognathic system (A14)		JU
The Unit familiarize students with the detailed anatomy of chest walls as well as borders and division of the mediastinum. Students' theoretical knowledge will be further evaluated and broadened by the work with anatomical specimens.	Description					Body regions (A01)		JU
The Unit familiarize students with the anatomy of the heart. Students' theoretical knowledge, gained by the self-study, will be further broadened and evaluated by the work with real anatomical specimens.	Description					Cardiovascular system (A07)		JU
The Unit is focused on the anatomy of the lungs and content of the mediastinum (excluding heart). Students theoretical knowledge, gained during self study, will be further broadened and evaluated by the work wit anatomical specimens.	Description					Respiratory system (A04)		JU
The Unit is focused on the process of forming body cavities and development of the respiratory system. On this base possible developmental abnormalities are presented. The class is realized in a form of a lecture.	Description					Respiratory system (A04)	Embryonic system (A16)	JU
The Unit is focused on the anatomy of the pectoral girdle and axillary fossa. Students theoretical knowledge, gained during self-study, will be further broadened and evaluated by the work with the real anatomical specimens.	Description					Musculoskeletal system (A02)		JU
The Unit is focused on the anatomy of the arm and anterior forearm, including its compartments, muscles, vascular and nervous system. It is completed by the study of the malformations of the upper limb. Students theoretical knowledge, gained during self-study, will be further broadened and evaluated by the work with real anatomical specimens.	Description					Body regions (A01)		JU
The Unit is focused on recognition of anatomical structures on images from such imaging modalities as X-rays	Description					Body regions (A01)		JU

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Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
The Unit is focused on the anatomy of the dorsal and lateral region of forearm and anatomy of the hand, including its muscles and vascular system. Students' theoretical knowledge, gained during self-study, will be further broadened and evaluated by the work wit real anatomical specimens.	Description					Musculoskeletal system (A02)	Nervous system (A08)	JU
The Unit is focused on the anatomy of the abdominal wall, peritoneum, its recesses, omentum lesser and major and lesser sac. Students theoretical knowledge, gained during self-study, will be further broadened and evaluated by the work with anatomical specimens.	Description					Body regions (A01)		JU
The Unit is focused on the structure, localization, vascularization and innervation of the stomach, duodenum, pancreas and spleen. Students' theoretical knowledge, gained during self-study, will be further broadened and evaluated by the work with anatomical specimens.	Description					Digestive system (A03)		JU
The Unit is focused on the development of the digestive system. It is realized in a form of a lecture, illustrated with numerous examples of pathology with explanation of their causes.	Description					Digestive system (A03)	Embryonic system (A16)	JU
The Unit is focused on the anatomy of the small and large intestine (excluding duodenum - a subject of another class), together with their vascularization and innervation. Students gain the theoretical knowledge during self-study. During practical class their understanding of the subject will be evaluated and broadened by the work with anatomical specimens.	Description					Digestive system (A03)		JU
The Unit is focused on the anatomy of the liver, bile ducts and portal vein circulation. Students' theoretical knowledge, gained by the self-study, will be further evaluated and broadened by the work with anatomical specimens.	Description					Digestive system (A03)		JU
The Unit summarizes and organizes students knowledge about the anatomy of the abdominal structures. It is realized in a form of a lecture, richly illustrated by clinical examples.	Description					Body regions (A01)		JU
The Unit is focused on the anatomy of the retroperitoneal space itself, together with kidneys, ureters, suprarenal glands, abdominal aorta, inferior vena cava and celiac plexus. Students' theoretical knowlegde, gained during self-study, will be further broadened and evaluated by the work with anatomical specimens.	Description					Body regions (A01)		JU
The Unit is focused on the structure of the pelvic cavity and anatomy of pelvic walls. Students' theoretical knowledge, gained during self-study, will be further broadened and evaluated by the work with anatomical specimens.	Description					Body regions (A01)		JU
The Unit s focused on the development of the urogenital system. It is realized in a form of a lecture, illustrated by the examples of pathology (especially developmental abnormalities) and their influence on the clinical management.	Description					Urogenital system (A05)	Embryonic system (A16)	JU

Text	Type	Verb	Level	Bloom Knowledge dimension	Bloom cognitive process dimension	MeSH 1	MeSH 2	Partner
The Unit is focused on the anatomy of the rectum, urinary bladder, sacral and pelvic plexus and internal iliac artery. Students' theoretical knowledge, gained by the self-study, will be broadened and evaluated by the work with real anatomical specimens during practicals.	Description					Urogenital system (A05)		JU
The Unit familiarizes students with the embryology and anatomy of the male genital system, including testis, epididymis, spermatic cord, scrotum, prostate, seminal vesicles, bulbourethral gland, male urethra and penis, with their vascularization and innervation. Students gain the theoretical knowledge during self-study. During practicals it will be further broadened and evaluated by the work with anatomical specimens.	Description					Urogenital system (A05)		JU
The Unit is focused on clinical anatomy of the upper limb. It is realized in a form of a lecture, illustrated by the clinical examples.	Description					Musculoskeletal system (A02)		JU
The Unit is focused on the anatomy of internal and external female genital organs. Students' theoretical knowledge gained during self-study, will be evaluated and broadened by the work with anatomical specimens during laboratory class.	Description					Urogenital system (A05)		JU
The Unit is focused on the buttock and thigh anatomy, including muscles of the pelvis and thigh, fascia, sacral and lumbar plexus, lymph nodes, iliac and femoral arteries, great and small saphenous vein. Students gain theoretical knowledge during self study. It will be further broadened and evaluated by the work with real anatomical specimens.	Description					Body regions (A01)		JU
The Unit is focused on the topographical anatomy of the organs of abdomen and pelvis. It is realized in a form of a lecture, illustrated by clinical examples.	Description					Body regions (A01)		JU
The Unit is focused on the anatomy of the popliteal fossa, muscles of the anterior, lateral and posterior compartment of leg, foot muscles, deep fascia of leg, tibial, sural common, superficial and deep fibular nerves, popliteal, anterior and posterior tibial artery and arteries of foot. Students theoretical knowledge, gained during self-study, will be further broadened and evaluated by the work with real anatomical specimens.	Description					Musculoskeletal system (A02)	Cardiovascular system (A07)	JU
The Unit is focused on recognition of anatomical structures on images from such imaging modalities as X-rays, CT and MRI. The class is conducted in a seminar form and is highly interactive with students. The prerequisites are theoretical knowledge and participation in practical classes from the dedicated subject.	Description					Body regions (A01)		JU
The Unit is focused on the nervous system of the lower limb. It is realized in a form of a lecture, illustrated by clinical examples.	Description					Musculoskeletal system (A02)	Nervous system (A08)	JU
The Unit, introducing basis of the embryology, is realized in form of e-learning and involves self-study and work with prepared online resources.	Description					Embryonic system (A16)		JU

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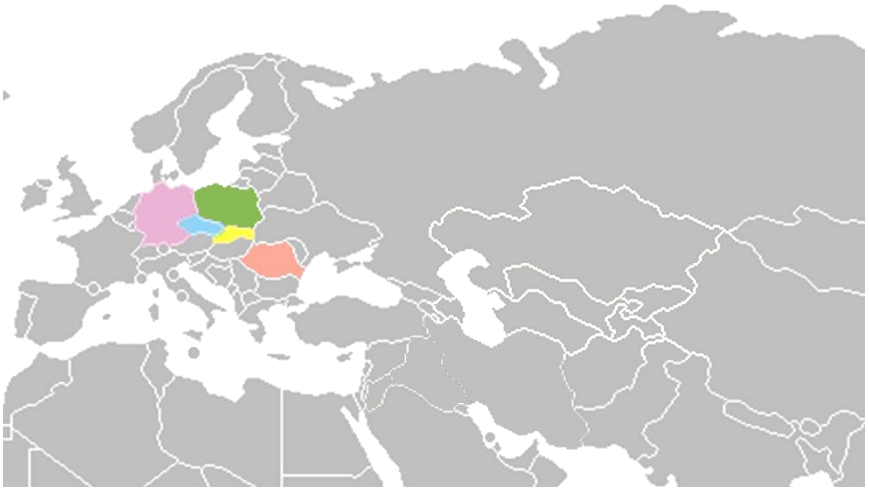

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