

**MED 3016 - Implantation, Placenta**

Course Name	Code	Semester	Type of course	Lecture	Work in Group	ECTS
Implantation Placenta	MED 3016	V	Elective	10	16	2
Faculty, Educational program	Faculty of Medicine, one-cycle Educational Program "Medicine"					
Author (s) of the course	<p><b>Jumber Jungiadze</b>- invited teacher            Mobile: 577 40 74 35; e-mail: <a href="mailto:jungiadze@mail.ru">jungiadze@mail.ru</a>            Prof. Leila Akhvlediani -Doctor of Biology;            Mobile:593537072; Tel.: +995422212535; Fax:+995422212537            E-mail: <a href="mailto:Leila.akhvlediani@bauinternational-uni.ge">Leila.akhvlediani@bauinternational-uni.ge</a>;            Consultation days in accordance with the individual agreement</p>					
Educational course format	Lecture, Group Work					
Educational Course Volume	<p><b>Total:</b> 60  <b>Contact hours :</b> 30 hrs, including:            1. Lecture -10 hrs.;            2. Group Work - 16 hrs.;            3. Mid-term exam - 2 hrs.;            4. Final Exam - 2 hrs.;  <b>Independent work:</b> 30 hrs.</p>					
Prerequisites	MED 1003, MED 1004					
The purpose (s) of tutorial course/modules	The aim of the course is to give the students the knowledge on the structure and development stages of zygote, implantation, functions of placenta, structure of decidua, its antigenic composition and the specifics of the immunological changes in pregnancy;					
Teaching and learning methods	<p><b>Lecture</b>- verbal method, Explanation, demonstration: visual presentation of the information (pictures, diagrams, slideshow, video);  <b>During the group work</b>-in order to <b>develop the skills of analysis and synthesis</b> the interpretation, classification and evaluation of the data will be carried out; in order to learn the new material the complex processes will be broken into small components and the realized separately; further they will be presented not as the separated pathologic processes, but as the components comprising the united homeostasis of the organism and perceived in unity;  <b>Asking Questions</b> – the students will be evaluated through oral checking of the current theoretical material by asking questions in the frames of the materials covered that will support to link the covered and the current materials and master the skills of the analysis;  <b>Project Preparation and Presentation</b>–the student shall choose a topic from the provided</p>					

	<p>materials or independently, find the needed material, work with books, develop the project plan and the expected outcome. The project must be presented as a 10-page printed material to be presented in PowerPoint format before the audience.</p> <p><b>Discussion/debate</b> – the students will be divided in groups, carry discussions on the concrete topic. The aim of the given activity is to develop the skills of listening, critical thinking, analysis, debating and making conclusions based on the revision of opinions.</p>
<p><b>Assessment criteria</b></p>	<p>Student's knowledge is assessed based on the 100-score system, of which 60 scores are addressed to the mid-term evaluations, and 40 scores are allocated for the final exam.</p> <p><b>Mid-term assessment includes the following components: (total 60 scores):</b></p> <ul style="list-style-type: none"> <li>• Attendance at every lecture- 1 score (1X10 = 10 scores)</li> <li>• Active participation in the group work- 10 scores ;</li> <li>• Preparation and presentation of the project-10 scores;</li> <li>• Discussion-10 scores;</li> <li>• <b>Mid-term exam - 20 scores;</b></li> </ul> <p>The final score for each group work is calculated through the average.</p> <p><b>Active participation during the group work is assessed in accordance with the following criteria (10 scores):</b></p> <p><b>10 scores</b>–has the deep and detailed knowledge on the topic: presents the topic in the consistent and laconic way. The student thinks quickly and expresses the opinion around the problematic question. The answer is correct from the terminology point of view. Sound knowledge and the ability of application of the basic as well as the auxiliary literature is revealed.</p> <p><b>9 scores</b> -has the deep knowledge on the topic: presents the topic in the consistent and laconic way. The student shows the ability of thinking however sounds not that confident when expressing the opinion on the problematic question. The answer is correct from the terminology point of view. Sound knowledge and the ability of application of the basic literature is revealed.</p> <p><b>8 scores</b>– has the deep knowledge on the topic: presents the topic in the consistent way. The student shows the ability of thinking, however sounds not that laconic when expressing the opinion on the problematic question. The answer the correct from the terminology point of view. The sound knowledge and the ability of application of the basic literature is revealed.</p> <p><b>7 scores</b> – does not have such fundamental knowledge of the topic: the answer is complete but inconsistent, has difficulties in presenting arguments on the problematic issue. Terminology is partially developed. Demonstrates the knowledge on the topic on the satisfactory level. Reveals the knowledge of the basic literature. Reveals difficulties in making conclusions;</p> <p><b>6 scores</b> – the answer is complete, but inconsistent; terminology partially developed; reveals the knowledge of the topic on the satisfactory level; Reveals difficulties in making conclusions;</p> <p><b>5 scores</b> – the answer is inconsistent, terminology partially developed; is not able to provide the answer to the problematic issue. Demonstrates the knowledge on the satisfactory level. Has difficulties in making conclusions.</p> <p><b>4 scores</b> – student demonstrates the general overview of the topic. Terminology is not developed. Content consistency is not followed. Demonstrates irrelevant knowledge of the literature;</p> <p><b>3 scores</b> – student demonstrates the general overview of the topic. Content consistency is not followed. Has difficulties in providing arguments and carry discussions on the topic.</p>

Demonstrates irrelevant knowledge of the literature;  
**2 scores** – student demonstrates the general overviews of the topic; complete absence of the ability to provide arguments; terminology is not developed at all, content consistency is not followed;

**1 score** – the answer is insufficient, no terminology awareness, no chronologic manner of the answer or the answer is mostly wrong, no knowledge of literature.

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**0 score** – Student demonstrates not even elementary knowledge of the topics.

#### **Project preparation – presentation criteria (max. 10 scores)**

1. Actuality of the problem- 1 score;
2. Proper planning - 1 score;
3. Review of the literature (data) on the issue-1 score;
4. Relevance of research methods with the research goal - 1 score;
5. Deductions accuracy and correlation with the main text -1 score;
6. Accuracy of the cited literature, trusted sources- 1 score;
7. Writing accuracy -1 score;
8. Language and style accuracy-1 score;
9. Visual and technical sides of the material - 1 score;
10. Culture of dispute and listening-1 score;

#### **Evaluation Criteria for the Discussion (max. 10 scores)**

- Critical thinking- 2 scores;
- Manner of debating- 2 scores;
- Ability to provide arguments - 2 scores;
- Time management - 2 scores;
- Academic and visual sides of the presented material- 2 scores;

**Midterm exam** is a test (multiple choice) that contains 40 questions, each rated 0.5 scores and totally counts 20 scores;

The student is allowed to pass the final exam, if he accumulates not less than 11 points for the mid-term evaluations (considering that he/she will get the maximum score at the final exam ).

#### **Final exam - 40 scores**

Is also the test (closed questions). It contains 80 questions (multiple choice); each one rates 0,5 scores (totally 40 scores).

The final exam is considered to be passed if the student accumulates at least **70% or more** out of the maximum assessment of the exam ( $40 \times 70 / 100 = 28$  ქულა).

Credit will be awarded if the student accumulates at least 51 scores out of 100 scores;

#### **Positive assessments:**

- (A) Excellent - 91 scores and more;
- (B) Very good - 81-90 scores;
- (C) Good - 71-80 scores;
- (D) Satisfactory - 61-70 scores;

	<ul style="list-style-type: none"> <li>(E) Enough - 51-60 scores;</li> </ul> <p><b>Negative assessments:</b></p> <ul style="list-style-type: none"> <li>(FX) didn't pass - 41-50 scores that means that student needs more work and is allowed to pass one additional exam;</li> <li>(F) Failed – 40 scores or less that means that the student did not perform enough and has to take the course again.</li> </ul> <p>The student has the right to pass an examination in the same semester. The interval between the final and additional exams should not be less than 10 days.</p>
<b>The basic literature</b>	<ol style="list-style-type: none"> <li>Keith Moore L; Persaud T.V.N;Mark G Torchia. <b>The Developing Human Clinically Oriented Embryology</b>. Elsevier Saunders. IX ed. 2013;</li> <li><b>Donald School Manual of Practical Problems in Obstetrics</b>. Edited by: Narendra Malhotra;Pandhir Puri;Jaideep Malhotra. Jaypee Brothers Medical Publishers. 2012.</li> </ol>
<b>The auxiliary literature</b>	<ol style="list-style-type: none"> <li><b>WILLIAMS GYNECOLOGY:</b> [HARDCOVER] BARBARA L.HOFFMAN; JOHN O. SCHORGE;JOSEPH Í.SCHAFFER. MC GRAW HILL MEDICAL.2012;</li> <li>The Developing Human: Clinically Oriented Embriology Cytology, Embryology, General Histology11.01.2003, 7 edition, p – 544</li> <li>Carlson BM: Human Embryology and Developmental Biology. 3rd Edition, Mosby, 2004.</li> <li>Moore KL, Persaud TVN: The Developing Human. Clinically Oriented Embryology. 9 th Edition, Saunders, Philadelphia, 2013.</li> <li>Larsen WJ: Human Embryology. 3 rd Edition, Churchill Livingstone, New York, 2001.</li> </ol>

#### The tutorial/training course content

Nº	Topics	Lecture (hour)	Application (hour)
1	Oogenesis, spermatogenesis, fertilization, zygote, molecular mechanism of implantation;	2	4
2	Development of implantation, ordinary antigen structure, fetal membrane of embryo;	2	3
3	Decidual development and antigen structure	2	3
	<b>Mid-term Exam</b>		2
4	Immunological profile of placenta;	2	3
5	Pregnancy and immunity; Embryo as allotrasplantant, immune infertility;	2	3
	<b>Final Exam</b>		2

### Learning Outcomes

Criteria	Competences
<b>Knowledge and Understanding</b>	<p>Has the deep knowledge on: Oogenesis, Spermatogenesis, Fertilization, Antigenic composition, development and implantation;</p> <p>Acknowledges: The immunological peculiarities of pregnancy and the idea of immune infertility;</p>
<b>Ability to Apply the Knowledge</b>	<p>Is able to: To differentiate the local immunosuppression from the systemic immunosuppression ; To select the simple methods of the diagnostics of the immune infertility;</p>
<b>Decision Making</b>	<p>Ability to compare the pregnant immunosuppressive condition with the general immunosuppression and immunodeficiency and make relevant decisions;</p>
<b>Ability to Communicate</b>	<p>Ability to communicate with the colleagues on the contemporary ideas about the implantation, infertility and pregnant immune mechanism; Ability to carry urgent discussions in groups and make relevant decisions;</p>
<b>Ability to Learn</b>	<p>Is able to manage the learning process independently, find the new literature and elicit novelties on the immune mechanism of the pregnant from the information sources;</p>
<b>Values</b>	<p>Love of mankind, Humanism, Sympathy, respect of the person and his/her rights, support of Pregnant, share the happiness over the embryo as the appearance of life new.</p>