

DISCIPLINE SHEET**ACADEMIC YEAR****2022-2023****1. DATA ABOUT THE STUDY PROGRAM**

1.1 Institution of higher education	UNIVERSITY OF MEDICINE AND PHARMACY OF CRAIOVA
1.2 Faculty	MEDICINE
1.3 Department	7
1.4 Study Domain	HEALTH
1.5 Study cycle	LICENCE
1.6 Study program/ Qualification	MEDICINE

2. DATA ABOUT THE DISCIPLINE

2.1 DISCIPLINE NAME	ANESTHESIOLOGY AND INTENSIVE CARE				
2.2. Discipline code	MED4205				
2.3 The holder of course activities	Luminița Cristina Chiuțu, Marius Bogdan Novac, Nicoleta Alice Marilena Drăgoescu				
2.4 The holder of seminar activities	Luminița Cristina Chiuțu, Marius Bogdan Novac, Nicoleta Alice Marilena Drăgoescu, Maria Stoica, Andreea Doriană Stănculescu				
2.5. Academic degree	Professor, Lecturer, Assistant Professor				
2.6. Employment (base norm/associate)	BASE NORM				
2.7. Year of study	IV	2.8. Semester	II	2.9. Course type (content) 2.10. Regime of discipline (compulsoriness)	CSD

3. THE ESTIMATED TOTAL TIME (teaching hours per semester)

3.1 Number of hours per week	3	3.2 From which course	1	3.3 seminary/laboratory	2
3.4 Total hours in curriculum	42	3.5 From which course	14	3.6 seminary/laboratory	28
Time found distribution (hours)					
Study from manual, course support, bibliography, and notes					5
Additional documentation in the library, specialized electronic platforms and, on the field					5
Training seminars / labs, homework, reports, portfolios, and essays					4
Tutoring					4
Examinations					2
Other activities, counselling, student scientific programs					2
3.7 Total hours of individual study	22				
3.9 Total hours per semester	50				
3.10 Number of credits	2				

4. PREREQUISITES (where appropriate)

4.1 curriculum	Students must have knowledge of anatomy, physiology, pathophysiology, semiology.
4.2 competency	-

5. CONDITIONS (Where applicable)

5.1. of course deployment	Prepare in advance by individual study
5.2. of seminary/ lab deployment	Prepare in advance by individual study

6. SPECIFIC COMPETENCES ACCRUED

PROFESSIONAL COMPETENCES	C1 - To identify medical conditions and to establish the correct diagnosis of the diseases or comorbidities.
	C2 – Appropriate therapeutic plan development according to specific Intensive Care conditions.
	C3 – Correct individual or collective professional injury risk evaluation, followed by appropriate preventive and corrective actions.
	C4 – To address health issues that are relevant or directly related to the social, economic and/or cultural community.
	C5 - To initiate and conduct basic scientific research

TRANSVERSAL COMPETENCES	<p>CT1. Autonomy and responsibility</p> <ul style="list-style-type: none"> • acquisition of moral guidelines, training of professional and civic attitudes that allow students to be fair, honest, non-confrontational, cooperative and understanding in the face of suffering, ready to help people interested in community development needs; • to know, respect and contribute to the development of moral values and professional ethics; • learn to recognize when a problem arises and provide responsible solutions to solve them. <p>CT2. Social interaction;</p> <ul style="list-style-type: none"> • recognize and have respect for diversity and multiculturalism; • have or learn to develop teamwork skills; • to communicate orally and in writing requirements, working methods, results, consult with the team; • to get involved in volunteering, know the key issues of the community. <p>CT3. Personal and Professional Development</p> <ul style="list-style-type: none"> • to be open to lifelong learning, • aware of the need for individual study as the basis of personal autonomy and professional development; • to optimally exploit its potential in creative and collective activities; <p>ability to use information and communication technology.</p>
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7. DISCIPLINE OBJECTIVES (based on the grid of specific competences acquired)

7.1 The general objective of the discipline	<p>Assimilation of the notions of organ insufficiency and dysfunction</p> <ul style="list-style-type: none"> ▪ Use of specific tools for supervision and maintenance of vital functions ▪ Theoretical acquisition of the pathology specific to the discipline ▪ Orientation of the therapeutic conduct within the ATI specialty
7.2 The specific objectives of the discipline	<p>Through the curriculum adapted to European quality standards, through the teaching and evaluation methods used, through the involvement of students in research and patient evaluation activities, the ATI discipline aims to form cognitive skills, habits and attitudes that underlie any act. preventive, diagnostic, curative or rehabilitative medical. Upon completion of the course the student will be able to master:</p> <p>Cognitive skills:</p> <ul style="list-style-type: none"> ▪ Monitoring of vital functions ▪ Recognition of the vital risk of a pathology ▪ Performing cardio-circulatory resuscitation ▪ Recognition of respiratory, renal, cardiac and circulatory prosthesis measures ▪ to interpret the deviations from the normal of some biological parameters and to look for the clinical relevance ▪ to integrate the theoretical and practical knowledge acquired in the discipline of physiology with those obtained from other disciplines and to use them as a platform for clinical training ▪ to communicate clearly, rigorously the acquired knowledge or the obtained results <p>Practical skills:</p> <ul style="list-style-type: none"> ▪ Identification of the pathology that requires treatment in intensive care ▪ Carrying out the clinical examination specific to the specialty ▪ Carrying out the correct cardiorespiratory resuscitation maneuvers ▪ Recognizing the need to prostheticize vital functions ▪ Obtaining practical skills in emergency situations ▪ Knowledge of the organization and functioning of the intensive care unit <p>Attitudes:</p> <ul style="list-style-type: none"> ▪ to be open to the acquisition of moral landmarks, the formation of professional and civic attitudes, which allow students to be fair, honest, non-conflicting, cooperative, understanding in the face of suffering, available to help people interested in community development ▪ to know, respect and contribute to the development of moral values and professional ethics ▪ learn to recognize a problem when it arises and provide responsible solutions to solve it ▪ to recognize and have respect for diversity and multiculturalism ▪ to have or learn to develop teamwork skills ▪ to communicate orally and in writing the requirements, the way of working, the results obtained, to consult with the team ▪ to get involved in volunteer actions, to know the essential problems of the

	<p>community</p> <ul style="list-style-type: none"> ▪ be open to lifelong learning ▪ to be aware of the need for individual study as a basis for personal autonomy and professional development ▪ to capitalize optimally and creatively on their own potential in collective activities ▪ to know how to use information and communication technology ▪ to have initiative, to get involved in the educational and scientific activities of the discipline
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8. CONTENTS

8.1 Course (content units)	Hours
1. Notions of anesthesia	2
2. Cardiopulmonary resuscitation and hemodynamic dysfunction	2
3. Intensive care in acute respiratory failure	2
4. Shock, MODS	2
5. Comas, neurological emergencies and acute intoxications	2
6. Hydro-electrolytic and acid-base balance, critical patient nutrition	2
7. Acute kidney injury	2
Total	14
BIBLIOGRAPHY	
<p>1. Chiuțu L, Dragoescu A, Novac M, Stoica M, Stanculescu A – Curs de Anestezie Terapie Intensiva pentru studenți și medici rezidenți, Ed. Sitech, Craiova 2022.</p> <p>2. Jonathan Thompson, Iain Moppett, Matthew Wiles Smith and Aitkenhead's Textbook of Anaesthesia, 7th Edition, Elsevier, 2019.</p> <p>3. Stoica V, Scripcariu V Compendiu de specialitati medico-chirurgicale – util pentru intrare in rezidentiat. Volumele 1 si 2, Ed. Medicala, 2016.</p> <p>4. John F. Butterworth, John D. Wasnick, David C. Mackey, Morgan and Mikhail's Clinical Anesthesiology 6th Edition, McGraw-Hill Education, 2018.</p> <p>5. Richard S. Irwin, Craig M. Lilly, Paul H. Mayo, James M. Rippe, Irwin and Rippe's Intensive Care Medicine, 8th Edition, Wolters Kluwer, 2018.</p> <p>6. Andrew D Bersten, Jonathan Handy, Oh's Intensive Care Manual, 8th Edition, Elsevier, 2018.</p> <p>7. Jean-Louis Vincent, Edward Abraham, Textbook of Critical Care, 7th Edition, Elsevier, 2018.</p> <p>8. Cook, Thomas, Nolan & Parr, Key Clinical Topics in Critical Care, JP Medical Ltd, 2014.</p> <p>9. Power & Kam, Principles of Physiology for the Anaesthetist, Hodder Arnold, 2012.</p> <p>10. Andrew D Bersten, Jonathan Handy, Oh's Intensive Care Manual, 8th Edition, 2018.</p> <p>11. Paul Warman, David Conn, Barry Nicholls, David Wilkinson, Regional Anaesthesia, Stimulation, and Ultrasound Techniques (Oxford Specialist Handbooks in Anaesthesia), Oxford University Press, 2014.</p> <p>12. Ted Lin, Tim Smith, Colin Pinnock, Chris Mowatt, Fundamentals of Anaesthesia, 4th Edition, Cambridge University Press, 2016.</p> <p>13. Ronald Miller, Lars Eriksson, Lee Fleisher, Jeanine Wiener-Kronish, Neal Cohen, William Young, Miller's Anesthesia, 2-Volume Set, 8th Edition, Elsevier, 2015.</p> <p>14. Jean-Louis Vincent, Le manuel de réanimation, soins intensifs et médecine d'urgence, Springer, 2013.</p>	
8.2 Practical work (topics / themes)	
1. Presentation of the intensive care unit, familiarization of students with the equipment used in IT, presentation of the operating room and the anesthesia machine, presentation of the IT observation sheet and anesthesia	2
2. Respiratory failure: clearance and maintenance of CAS permeability, oro-tracheal intubation, extubation, aspiration of lung secretions, modes of ventilation, monitoring of the patient with respiratory failure	2
3. Heart failure: hemodynamic cardiac monitoring, blood pressure measurement, pulse oximetry, central venous pressure measurement, vascular approach - peripheral and central venous approach, central catheter mounting, cardiopulmonary resuscitation - BLS, ALS, prolonged life support, CV stop in situations specious	2
4. Gastrointestinal tract: liver failure, HDS, acute pancreatitis, monitoring of the patient with gastrointestinal problems	2
5. Acute renal injury: diuresis monitoring, creatinine clearance	2
6. Acid-base balance: buffer systems, respiratory acidosis, respiratory alkalosis, metabolic acidosis, metabolic alkalosis, mixed acidosis, mixed alkalosis, acid-base rebalancing in the critical patient	2
7. Hydroelectrolytic balance: electrolytes, crystalloid solutions, colloidal solutions, dehydration, hyperhydration, hydroelectrolytic balance in the critical patient	2
8. Parenteral and enteral nutrition: evaluation of a patient's nutritional needs, installation of the nasogastric tube, enteral nutrition, parenteral nutrition, solutions for enteral and parenteral nutrition	2
9. Comas: Glasgow score, degree of coma, specific treatment of comas, non-specific treatment of comas, nursing elements, seizures, epileptic	2

10. Shock: hypovolemic shock, hemorrhagic shock, cardiogenic shock, septic shock, traumatic shock 11. Systemic inflammatory response: SIRS, MSOF and MODS, principles and treatment modalities in SIRS and MOF	2
11. Systemic inflammatory response: SIRS, MSOF and MODS, principles and treatment modalities in SIRS and MSOF	2
12. Acute intoxications: the most frequent intoxications - specific treatment modalities, non-specific treatment	2
13. General anesthesia: pre-anesthesia assessment, anamnesis, anesthetic risk determination, pre-anesthetic sedation, pre-anesthesia, induction, maintenance, awakening, monitoring of postoperative vital functions	2
14. Loco-regional anesthesia: spinal-technical anesthesia, epidural-technical anesthesia, material, peripheral nerve blocks	2
TOTAL	28
BIBLIOGRAPHY	
<ol style="list-style-type: none"> 1. Chiutu L, Dragoescu A, Novac M, Stoica M, Stanculescu A – Curs de Anestezie Terapie Intensiva pentru studenti si medici rezidenti, Ed. Sitech, Craiova 2017. 2. Stoica V, Scripcariu V Compendiu de specialitati medico-chirurgicale – util pentru intrare in rezidentiat. Volumele 1 si 2, Ed. Medicala, 2016. 3. Morgan and Mikhail's Clinical Anesthesiology 6th Edition, McGraw-Hill Education, 2018. 4. Jean-Louis Vincent, Edward Abraham Textbook of Critical Care, 7th Edition, Elsevier, 2017. 	

9. CORROBORATING THE DISCIPLINE CONTENT WITH THE EXPECTATIONS OF EPISTEMIC COMMUNITY REPRESENTATIVES, PROFESSIONAL ASSOCIATIONS AND EMPLOYEE REPRESENTATIVES RELATING TO THIS PROGRAM

- ATI discipline is a fundamental discipline, mandatory for a student to become a doctor
- The knowledge, practical skills and attitudes learned in this discipline provide the basis for study of pathological processes that will be detailed in other disciplines and are the basis for understanding and learning any preventive, diagnostic, curative or recovery medical act.

10. METHODOLOGICAL LANDMARKS

Types of activity	Techniques of teaching / learning materials, resources: lecture, interactive group work, etc. In special situations (state of emergency/alert or any other special situation where physical attendance to classes is not possible), the teaching activities may be performed online using university approved online platforms. Online teaching content will be adapted accordingly to insure all department teaching objectives are fulfilled.
Course	Prelecture, debate, questioning.
Practical work	Practical application, problem-solving, conversation, clinical cases.
Individual study	<i>Prior to courses, clinical training, exam (14 hours of individual study)</i>

11. RECOVERY PROGRAM

Absences recoveries	No. absences that can recover	Location of deployment	Period	In charge	Scheduling of topics
	2	ICU Department	Weekly	All teachers	1-2 topics/day
Schedule consultations / Students' Scientific Program	-	ICU Department	Monthly	All teachers	Scheduled topics
Program for students poorly trained	-	ICU Department	Weekly	All teachers	Weekly topic

12. ASSESSMENT

Activity	Types of assesment	Methods of evaluation	Percentage from final grade
Lecture	Formative assesment through debates and surveys during the semester Summative assesment during the exam	Multiple Choice Questions Answering System (MCQ)/MCQ with the help of the IT platform in the online version.	70%
Practical work	Periodic assesment during the semester Summative assesment during the exam	Clinical evaluation simultaneously with the MCQs / with the help of the video platform in the online version.	20%
Periodic assesment			10%
Assesment of individual activities			

Minimum performance standard	At least 50% for each component of the evaluation	
13. GUIDANCE AND COUNSELLING PROGRAMS		
Professional guidance and counselling programs (2 hours/monthly)		
Scheduling the hours	Location	In charge
2 hours	ICU department	All teachers

Endorsement date in the department: 30.09.2022

Department Director,
Prof. Luminita CHIUȚU

Coordinator of study program,
Prof. Marius Eugen CIUREA

Discipline holder,
Prof. Luminita CHIUȚU