Course Title	**Therapeutics and Prescribing**						
Course Code	**MED-605**						
Course Type	Required						
Level	Undergraduate						
Year / Semester	Year 6/ Semester 12 (Spring)						
Teacher's Name	**Course Lead:** Prof Aleksandar Jovanovic						
ECTS	4	Lectures / week	4	Laboratories / week	0	Clinical Practice	36
Course Purpose and Objectives	Prescribing is a vital skill for all newly qualified doctors. From Day 1 of their House Officer jobs, students will prescribe drugs, and review existing prescriptions. It is essential that they are competent to undertake this role. Unfortunately, newly qualified doctors are prone to medication errors. Prescribing probably has more potential to bring about benefit and harm for patients than any other duty undertaken by a doctor in the early phase of their career. The objectives of this course are: • To prepare students to be able to prescribe drugs safely upon completion of their course. • To ensure students are able to calculate drug doses accurately. • To ensure students are able to write prescriptions and fill out drug charts accurately. • To ensure students are able to inject drugs, at the correct dose, intramuscularly, subcutaneously and intravenously.						
Learning Outcomes	After the completion of the course the students should be able to: 1. Demonstrate effective history taking with relation to prescribed drugs, over the counter medication, complementary and alternative therapies, illicit drug use and allergies 2. Correctly prescribe oxygen, "As Required" medication, fluids and blood products, under supervision 3. Demonstrate the correct use of an in-patient prescription chart and correctly complete an insulin chart for diabetics and an anticoagulation chart for patients on warfarin 4. Demonstrate use of the British National Formulary (or similar) to support prescribing 5. Explain the issues surrounding prescribing of unlicensed medicines 6. Define concordance, adherence and compliance with respect to drug therapy 7. Demonstrate how to write a prescription for a patient						

	8. Demonstrate effective prescription of controlled drugs and explain the special considerations required when prescribing this drug group 9. Calculate drug dosages based on patient weight or eGFR/creatinine clearance 10. Calculate the strength of an infusion based on the required rate of drug administration 11. Give subcutaneous, intramuscular and intravenous injections 12. Mix and inject drugs into an intravenous infusion bag and prepare and give drugs by infusion pump 13. Prepare and give nebulised drugs 14. In general for each condition studied, list the main drugs (if any) that relieve symptoms, produce a cure or improve prognosis or reduce risk of recurrence. 15. Recognise that drug prescribing may be affected by a patient's condition e.g. presence of liver or kidney disease, pregnancy, breast feeding, being very young or very old 16. Explain how you would time blood sampling to determine whether drugs are at a) therapeutic and b) toxic plasma concentrations and describe what actions you would take in response to the results 17. List body fluids other than blood which can be assayed for drug concentrations and explain the clinical and forensic applications of these tests 18. Describe the classification of adverse drug reactions and give examples 19. Describe the emergency assessment and resuscitation of a patient following overdose 20. Describe the symptoms and signs following overdose with aspirin, paracetamol, opiates, carbon monoxide, tricyclic antidepressants, benzodiazepine 21. Describe the specific management including antidotes of each drug listed 22. Describe the role of desensitisation therapy in the management of allergy to insect stings (bee, wasp) and pollen (grass, trees) 23. Describe the role of Research Ethics Committees, Drugs and Therapeutics Committees and the National Institute for Clinical Excellence (NICE)		
Prerequisites	None	Required	None
Course Content	• Prescribing and writing a prescription • Drug dose calculation • Intramuscular, subcutaneous and intravenous injections • Regulations around dispensing drugs • Dealing with adverse drug reactions		

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Dealing with drug overdose
National Formularies
Drugs bringing about a cure, an improved prognosis and a reduction in recurrence
Illicit drugs
Allergic reactions to drugs and how to deal with them
Dealing with drug-related emergencies
The role of national bodies such as NICE

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<tr><td>Teaching Methodology</td><td>The course is delivered by clinical placements, lectures, tutorials, case studies and theatre attendance.</td></tr>
<tr><td>Bibliography</td><td>
Required Textbooks/Reading:
<table>
<tr><th>Authors</th><th>Title</th><th>Publisher</th><th>Year</th><th>ISBN</th></tr>
<tr><td>Brunton, Laurence L.</td><td>Goodman & Gilman's the pharmacological basis of therapeutics (12th ed.)</td><td>McGraw-Hill</td><td>2011</td><td>9780071624428</td></tr>
<tr><td>Koda-Kimble, Mary Anne</td><td>Applied therapeutics :the clinical use of drugs</td><td>Wolters Kluwer Health/Lippincott Williams & Wilkins</td><td>2009</td><td>9780781765558</td></tr>
</table>
Recommended Textbooks/Reading:
<table>
<tr><th>Authors</th><th>Title</th><th>Publisher</th><th>Year</th><th>ISBN</th></tr>
<tr><td>Joint Formulary Committee</td><td>British national formulary</td><td>Royal Pharmaceutical Society</td><td>2013</td><td>9780857110848</td></tr>
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<tr><td>Assessment</td><td>Final year written exam and final year OSCE. The written assessment will be by Single Best Answer MCQs and Short Answer Questions.</td></tr>
<tr><td>Language</td><td>English</td></tr>
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