

BLOCK 1

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Code: A1

NAME OF THE BLOCK	BLOCK 1 (A 1)
Name of the Elective	Anatomy - Histochemical basis & protocols of H & E staining procedure & slide preparation
Location of hospital lab or research facility	Research Laboratory , Department of Anatomy
Name of internal preceptor (s)	Dr. Sween Walia, Dr. Sahdeep Kaur
Name of external preceptor, if applicable	-
Learning objectives of elective	<ol style="list-style-type: none"> 1. To learn and demonstrate about equipments used in the process. 2. To demonstrate correct method of tissue preparation 3. To prepare a write up (flowcharts) of all steps followed 4. To prepare well stained slides (H & E staining)
Number of students that can be accommodated in this elective	6
Prerequisites for elective	NA
List of activities of student participation	<ol style="list-style-type: none"> 1. Working daily in Histology Laboratory as team member 2. Presentation of seminar on principles of tissue processing & staining steps 3. Tissue processing 4. Preparation of stains 5. Slide staining (by H & E)
Learning resources	<ol style="list-style-type: none"> 1. Anatomy Histology text books (Carleton's histo techniques from Department library) 2. Handouts on Laboratory techniques
Portfolio entries required	<ol style="list-style-type: none"> 1. Documentation of seminar presented 2. Documentation of step by step procedure 3. Documentation of two well stained slides (by H & E)
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	<ol style="list-style-type: none"> 1. Attendance 2. Seminar presentation 3. Performance of assigned task 4. Completion of handout notes on full procedure
Other comments	-

NAME OF THE BLOCK	BLOCK 1 (A 2)
Name of the Elective	Anatomy - Morphometric study of 25 dried human skulls
Location of hospital lab or research facility	Dissection Hall, Department of Anatomy
Name of internal preceptor (s)	Dr. Bhavna, Dr. Shubhangi Maheshwari
Name of external preceptor, if applicable	NA
Learning objectives of elective	<ol style="list-style-type: none"> 1. To prepare a research protocol as per ICMR guidelines 2. To demonstrate the correct use of anthropometric instruments 3. To collect data, prepare and analyse on spread sheet
Number of students that can be accommodated in this elective	6
Prerequisites for elective	NA
List of activities of student participation	<ol style="list-style-type: none"> 1. Work with supervisor in making observations & collect data. 2. Presentation of research protocol 3. Demonstrate anthropometric measurement in 5 human skulls 4. Analysis of data with the help of statistician 5. Data sheet submission
Learning resources	<ol style="list-style-type: none"> 1. SAMARA, O. A.; BADRAN, D. H. et. al Morphometric analysis of the foramen magnum. Int. J. Morphol., 35(4):1270-1275, 2017. 2. Anatomy books of Head & Neck
Portfolio entries required	<ol style="list-style-type: none"> 1. Documentation of research protocol 2. Documentation of datasheet 3. Analysed data sheet
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	<ol style="list-style-type: none"> 1. Attendance 2. Seminar Presentation 3. Providing basic measuring equipment care 4. Completion of assigned task 5. Verification of portfolio
Other comments	-

NAME OF THE BLOCK	BLOCK 1 (A 3)
Name of the Elective	Anatomy - Specimen procurement from cadaver & mounting techniques in Anatomy Museum
Location of hospital lab or research facility	Museum, Department of Anatomy
Name of internal preceptor (s)	Dr. Maninder Kaur, Dr. Jyoti Kumari
Name of external preceptor, if applicable	NA
Learning objectives of elective	<ol style="list-style-type: none"> 1. To obtain experience in preparation of wet specimens & dry specimens 2. To learn about colour restoration & demonstrate preservation of specimens 3. To learn special methods for preparation of models for gross anatomy & embryology
Number of students that can be accommodated in this elective	6
Prerequisites for elective	NA
List of activities of student participation	<ol style="list-style-type: none"> 1. Work daily with a supervisor in observing, assisting in preparation of specimen 2. Demonstrate the procurement of specimen 3. Mounting the specimens in jar 4. Preparation of museum catalogue 5. Seminar on preparation & fixation of specimens
Learning resources	Research papers- Neelamjit Kaur TECHNIQUE FOR PRESERVING COLOURED WET SPECIMEN IN ANATOMY MUSEUM. Int J Anat Res 2017;5(2.2):3824-3828.
Portfolio entries required	<ol style="list-style-type: none"> 1. Documentation of seminar presentation 2. Documentation of prepared specimens
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	<ol style="list-style-type: none"> 1. Attendance 2. Submission of one well mounted specimen with proper labelling by each student 3. Seminar presentation
Other comments	-

NAME OF THE BLOCK	BLOCK 1 (A 4)
Name of the Elective	Blood Bank- Donor motivation, blood donation and post donation care
Location of hospital lab or research facility	Blood Bank Centre
Name of internal preceptor (s)	Dr. Neha Syal
Name of external preceptor, if applicable	NA
Learning objectives of elective	<ol style="list-style-type: none">1. To motivate blood donors2. Observe blood donation3. To provide post donation care and instructions
Number of students that can be accommodated in this elective	6
Prerequisites for elective	NA
List of activities of student participation	<ol style="list-style-type: none">1. Counsel and motivate donors for blood donation2. Observe donor phlebotomy3. Provide post donation information to donor4. Collect data to understand barriers to voluntary blood donation
Learning resources	Donor deferral guidelines 2017. NACO website.
Portfolio entries required	Reflective writing
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	-Attendance -Formative Today participation in donor motivation and performance of assigned tasks.
Other comments	-

Code: A5

Name of block	BLOCK 1 (A5)
Name of elective	Biochemistry- Clinical Sampling Practices
Location of elective	Sample collection area, Gian Sagar Hospital
Name of internal preceptor	Dr Sunil Kumar Mr Manish
Name of external preceptor	NA
Learning objectives	<ul style="list-style-type: none">• To study the pre-analytical variations that can be associated with blood sampling.• To enumerate the relevant history to be assessed to rule out interferences.• To demonstrate the skills of blood sampling techniques for various test parameters.• To enumerate and explain the order of draw for multiple blood specimens• To enumerate and demonstrate the sample storage and transport to the lab correctly and at right time.
Number of students that can be accommodated	6
Prerequisites of electives	<ul style="list-style-type: none">• Knowledge about types of lancets and needles.• Knowledge about biomedical waste disposal.• Immunizations, Universal precautions.
List of activities of students participation	<ul style="list-style-type: none">• Assisting the lab technician in sample collection ,storage and transport of samples and to take necessary action to prevent errors• To work in sample collection area considering factors such as technique, communication, and safety procedures.• Share his/her learning experiences of different sampling techniques using powerpoint presentation
Learning resources	Foundation of
Portfolio entries required	<ul style="list-style-type: none">• Documentation of work done• Documentation of presentations done
Log book entry required	Successful completion of posting as certified in the log book “Meets expectation ‘M’ grade”
Assessment	<ul style="list-style-type: none">• Attendance• Day to day participation in given activities• Assessment of documented work done during the posting

Code: A6

Name of block	BLOCK 1 (A6)
Name of elective	Diagnostic Biochemistry
Location of elective	Clinical Biochemistry Lab, GSMCH
Name of internal preceptor	Dr Brinder Chopra Dr Priyanka Malik
Name of external preceptor	NA
Learning objectives	<ul style="list-style-type: none">• Enlist various routine parameters being carried out in clinical biochemistry lab and their clinical correlation• To observe total testing process and its importance.• To study the laboratory operations and errors in the pre-analytical, analytical and post analytical phases.• To demonstrate the conduct of quality control for various routine biochemical tests• To be able to reduce laboratory errors in order to improve laboratory performance
Number of students that can be accommodated	6
Prerequisites of electives	<ul style="list-style-type: none">• Students should have the knowledge of universal precautions and safety measures to be taken while working in laboratory• Student should be immunized with HBV and COVID-19 vaccination• Student should wear apron, mask and gloves while working
List of activities of students participation	<ul style="list-style-type: none">• Observe total testing process along with the laboratory staff.• Discuss the observations/results with the preceptors.• Take necessary action to prevent errors• Present quality control assessment in the form of LJ chart for atleast two lab tests done by student as a case workup• Share his/her learning experiences of diagnostic significance of various routine lab parameters using power

	point presentation
Learning resources	Teitz, department provided handout
Portfolio entries required	<ul style="list-style-type: none"> • Documentation of work done in the laboratory • Documentation of presentations done
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	<ul style="list-style-type: none"> • Attendance • Day to day participation in given activities • Presentation of respective LJ Charts and their interpretation • Presentation of clinical case scenarios given by the preceptor

Code: A7

Name of block	BLOCK 1 (A7)
Name of elective	Special Biochemical Markers
Location of elective	Hospital Clinical Biochemistry Lab, GSMCH
Name of internal preceptor	Dr Saloni Ms. Tarundeep Kaur
Name of external preceptor	NA
Learning objectives	<ul style="list-style-type: none">• Enlist various special parameters being carried out in clinical biochemistry lab and their clinical correlation• To observe total testing process and its importance.• To study the laboratory operations and errors in the pre-analytical, analytical and post analytical phases.• To demonstrate the conduct of quality control for various special biochemical tests• To be able to reduce laboratory errors in order to improve laboratory performance
Number of students that can be accommodated	6
Prerequisites of electives	<ul style="list-style-type: none">• Students should have the knowledge of universal precautions and safety measures to be taken while working in laboratory• Student should be immunized with HBV and COVID-19 vaccination• Student should wear apron, mask and gloves while working
List of activities of students participation	<ul style="list-style-type: none">• Observe total testing process along with the laboratory staff.• Discuss the observations/results with the preceptors.• Take necessary action to prevent errors• Present quality control assessment in the form of LJ chart for at least two lab tests done by student as a case workup• Share his/her learning experiences of diagnostic significance of various special lab parameters using power point presentation

Learning resources	Teitz, department provided handout
Portfolio entries required	<ul style="list-style-type: none"> • Documentation of work done in the laboratory • Documentation of presentations done
Log book entry required	Successful completion of posting as certified in the log book “Meets expectation ‘M’ grade”
Assessment	<ul style="list-style-type: none"> • Attendance • Day to day participation in given activities • Presentation of respective LJ Charts and their interpretation • Presentation of clinical case scenarios given by the preceptor

Code: A8

NAME OF BLOCK	BLOCK 1
Name of Elective	Community Outreach Experience (to see implementation of ICDS/ and Mid Day Meal programmed /National Nutrition Programme in Community)
Location of Hospital lab or research facility	UHTC, Rajpura, Field area (Anganwadi centre/ Primary school)
Name of internal preceptor (s)	Dr. Pushapindra Kaushal, Dr. Rupali Verma Bagga, Dr. Jyoti
Name of external preceptor (if any)	N/A
Learning objectives of the elective	1. To observe the functioning of Anganwadi centre under supervision. 2. To do growth monitoring of children in A.W.C. 3. Provide Nutrition & Health education to expectant and Nursing mothers.
Number of students that can be accommodated in the elective	6
Prerequisites for the elective	Required immunizations to be taken.
List of activities in which the student will participate	1. To observe the service being provided under ICDS and mid day meal programme in primary schools/A.W.Cs. 2. To do growth monitoring of children < 5 year of age. 3. To conduct Nutrition & Health Education sessions for pregnant and nursing mothers under supervision. 4. To provide Vitamin A and I.F.A to children.
Learning resources for students	1. ICDS and National Nutrition Programme from D.K. Tanejas Health Polices and Programme in India. 2. K .Park textbook of preventive and social medicine.
Portfolio entries required	1. Daily log of activities participated in. 2. At least 02 session of Health Education conducted. 3. Growth monitoring of atleast 5 children.
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade".
Assessment	1. Attendance. 2. Successful verification of required Portfolio entries.
Other comments	N/A

Code: A9

NAME OF BLOCK	BLOCK 1
Name of Elective	Health Care Data Processing
Location of Hospital lab or research facility	Biostatistical Unit, Dept of Community Medicine, GSMCH
Name of internal preceptor (s)	Mr. Manpreet Singh, Dr. Rupali Verma Bagga
Name of external preceptor (if any)	-
Learning objectives of the elective	1. To demonstrate use of statistical software. 2. To enter data in electronic record correctly. 3. To present data. 4. To do analysis of data. 5. To be able to interpret data.
Number of students that can be accommodated in the elective	6
Prerequisites for the elective	1. Laptop. 2. Basic Knowledge of M.S Excel/SPSS/Python.
List of activities in which the student will participate	1. Extraction of data. 2. Cleaning of data. 3. Coding of data. 4. Analysis data with software.
Learning resources for students	Research Methodology methods and techniques by CR Kothari.
Portfolio entries required	1. Daily log book entry of the activities performed. 2. At least processing of 1 Data set under supervision.
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade".
Assessment	1. Attendance. 2. Successful verification of required Portfolio entry.
Other comments	N.A

Code: A10

NAME OF BLOCK	BLOCK 1
Name of Elective	Immunization Centre
Location of Hospital lab or research facility	GSMCH Hospital
Name of internal preceptor (s)	Dr. Praizy, Dr. Amarjit Singh
Name of external preceptor (if any)	N/A
Learning objectives of the elective	1. Functioning of immunization centre. 2. Orientation to UIP vaccination Schedule. 3. Maintenance of cold chain.
Number of students that can be accommodated in the elective	6
Prerequisites for the elective	1. Necessary Immunization 2. Universal Precaution certificate.
Learning resources for students	Handbook of Immunization for Medical Officers.
List of activities in which the student will participate	1. Maintenance of registers and vaccines. 2. Recording of temp, cold chain. 3. AEFI form. 4. Administration of vaccines.
Portfolio entries required	1. Daily log of activities participated in. 2. No of vaccines administered.
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	1. Attendance. 2. Viva Voice assessment. 3. Successful completion of learning objectives and log book entry.
Other comments	N/A

Code: A11

NAME OF BLOCK	BLOCK 1
Name of Elective	Forensic Medicine- Anthropometric measurements of human body for determination of stature
Location of Hospital lab or research facility	Dept. of Forensic Medicine
Name of internal preceptor (s)	Dr. Shekhar Chumber, Dr. Gurjeet Singh, Dr. Abhishek
Name of external preceptor (if any)	N/A
Learning objectives of the elective	1. To know the significance of anthropometric measurement. 2. To know medico-legal aspect of anthropometric measurement.
Number of students that can be accommodated in the elective	6
Prerequisites for the elective	None, Necessary immunization
Learning resources for students	Journals, Research Paper
List of activities in which the student will participate	-Examine Medico-legal cases -Post Mortem Report
Portfolio entries required	Activities done by them abstract, e-posters in log books.
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	1. Attendance. 2. Presentation
Other comments	N/A

Code: A12

NAME OF BLOCK	BLOCK 1
Name of Elective	Forensic Medicine- Medico-legal examination of case of Physical assault
Location of Hospital lab or research facility	Dept. of Forensic Medicine
Name of internal preceptor (s)	Dr. Shekhar Chumber, Dr. Gurjeet Singh, Dr. Abhishek
Name of external preceptor (if any)	N/A
Learning objectives of the elective	1. How to take consent. 2. To know various legal aspects. 3. To know how to prepare injury report. 4. To know how to give subsequent opinion.
Number of students that can be accommodated in the elective	6
Prerequisites for the elective	None, Necessary immunization
Learning resources for students	Journals, Research Paper
List of activities in which the student will participate	-Examine Medico-legal cases -Post Mortem Report
Portfolio entries required	Activities done by them abstract, e-posters in log books.
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	1. Attendance. 2. Presentation
Other comments	N/A

Code: A13

NAME OF BLOCK	BLOCK 1
Name of Elective	Forensic Medicine- Medico-legal examination of drunk person
Location of Hospital lab or research facility	Dept. of Forensic Medicine
Name of internal preceptor (s)	Dr. Shekhar Chumber, Dr. Gurjeet Singh, Dr. Abhishek
Name of external preceptor (if any)	N/A
Learning objectives of the elective	1. How to take consent. 2. To know various legal aspects related to examination of drunk person. 3. To know how to conduct preliminary documentation. 4. To know how to conduct physical examination. 5. To know how to give opinion in case of drunkenness. 6. To know how collect, preserve and dispatch various biological samples in case of drunkness.
Number of students that can be accommodated in the elective	6
Prerequisites for the elective	None, Necessary immunization
Learning resources for students	Journals, Research Paper
List of activities in which the student will participate	-Examine Medico-legal cases -Post Mortem Report
Portfolio entries required	Activities done by them abstract, e-posters in log books.
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	1. Attendance. 2. Presentation
Other comments	N/A

NAME OF THE BLOCK	BLOCK 1
Name of the Elective	Designing of an e-poster
Location of hospital lab or research facility	Medical Education Unit & Library computer Lab
Name of internal preceptor (s)	Dr. Priyanka Malik, Dr. Parik Dev
Name of external preceptor, if applicable	NA
Learning objectives of elective	<ol style="list-style-type: none"> 5. To study research done on a given topic and extract relevant information for inclusion in an e-poster 6. Develop basic skills in manipulating images, text and layout within the chosen design software 7. Summarize key points and organize content in a logical and coherent manner
Number of students that can be accommodated in this elective	05
Prerequisites for elective	<ol style="list-style-type: none"> 1. Familiarity with basic computer skills 2. Ability to conduct basic online research to gather information on a given topic
List of activities of student participation	<ol style="list-style-type: none"> 6. Write an abstract in word format on the given research topic 7. Design e-poster (as power point) that adhere to accessibility standards for diverse audiences 8. Effectively present e-poster, engaging with the audience
Learning resources	Websites like Smashing Magazine, Creative blog adobe illustrate and canva
Portfolio entries required	<ol style="list-style-type: none"> 4. Documentation of abstract 5. Documentation of e-poster 6. Documentation of presentation
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	<ol style="list-style-type: none"> 5. Attendance 6. Day to day participation in given activities 7. Presentation of e-poster
Other comments	-

NAME OF THE BLOCK	BLOCK 1
Name of the Elective	Microbiology- Bacteriology Lab Experience
Location of hospital lab or research facility	Clinical Microbiology Lab, 4 th Floor of the Hospital,
Name of internal preceptor (s)	Dr. Maninder Kaur, Dr. Neetika Kalra
Name of external preceptor, if applicable	NA
Learning objectives of elective	<ol style="list-style-type: none"> 1) The students will observe, assist, and perform the process of culturing of the microbiology samples. 2) The students will assist and perform the identification of the isolated bacteria and antibiotic sensitivity testing of bacterial isolates. 3) To assist in the media preparation room in preparation of various types of media. 4) To assist in the department teaching programme.
Number of students that can be accommodated in this elective	06
Prerequisites for elective	-----
List of activities of student participation	<ol style="list-style-type: none"> 1) The students will observe and assist in the process of the samples receiving in the lab. 2) To prepare a list of the various samples received in microbiology lab and the corresponding infections. 3) To perform the culture, identification and antibiotic sensitivity of the isolates received in the lab independently. 4) To present their findings in the case discussion-daily one student. 5) To assist and perform in preparation of Blood Agar, Chocolate Agar, and RCM. 6) To assist in use of autoclave in the laboratory. 7) Submit assignment of various types of controls used in the autoclave. 8) Interpretation of microbiology lab reports.
Learning resources	
Portfolio entries required	
Log book entry required	Successful completion of posting as certified in the log book "Meets expectation 'M' grade"
Assessment	<ol style="list-style-type: none"> 8. Attendance 9. Day to day participation in given

	activities 10. Presentation of e-poster
Other comments	-

Code: A16

NAME OF THE BLOCK	BLOCK 1
Name of the Elective	Microbiology- Infection Control Programme
Location of hospital lab or research facility	Clinical Microbiology Lab, 4 th Floor of the Hospital,
Name of internal preceptor (s)	Dr. Maninder Kaur, Dr. Bhavana Yadav
Name of external preceptor, if applicable	NA
Learning objectives of elective	<ol style="list-style-type: none"> 1) The students will be sensitized to various infection control practices in the hospital. 2) To define the basic definitions used in HAI surveillances. 3) The students will observe and assist ICN in audit of hand hygiene. 4) The students will learn to track the cases of CAUTI and VAP and learn to calculate the CAUTI and VAP rates. 5) To students will audit the BMW in various clinical departments. 6) The students will undertake small hand on activity of swabbing the hands of HCW and putting up culture of hand swabs.
Number of students that can be accommodated in this elective	06
Prerequisites for elective	-----
List of activities of student participation	<ol style="list-style-type: none"> 1) To visit ICU and to enlist the patients with urinary catheter and on ventilator. 2) To prepare A4 size chart von bundle approach for prevention of CAUTI and VAP. 3) To prepare PPT on the clinical and microbiological creation for CAUTI and VAP. 4) To perform BMW auditing and prepare a report of the same and present it. 5) Activity of hand swab collection of HCW and to put culture of the same prepare the report and present it. 6) To track the total catheter days or ventilator days in ICU and calculation of CAUTI and VAP rates.
Learning resources	
Portfolio entries required	
Log book entry required	Successful completion of posting as certified in the log book “Meets expectation ‘M’ grade”

Assessment	11. Attendance 12. Day to day participation in given activities 13. Presentation of e-poster
Other comments	-

NAME OF THE BLOCK	BLOCK 1
Name of the Elective	Microbiology- Molecular Lab Experience
Location of hospital lab or research facility	Molecular Lab, 3 th Floor of the Medical college,
Name of internal preceptor (s)	Dr. Maninder Kaur, Dr. Neha Sharma, Mr. Dipankar Biswas
Name of external preceptor, if applicable	NA
Learning objectives of elective	<ol style="list-style-type: none"> 1) The student will assist and perform the sample collection for RT-PCR test for covid. 2) The students will perform the triple layer packing of RT-PCR samples for Covid. 3) The students observe the full procedure of sample decontamination, RNA extraction and master mix preparation in the molecular lab and prepare assignment of the steps of the same. 4) The students must be able to interpret the reports of RT-PCR test for COVID.
Number of students that can be accommodated in this elective	05
Prerequisites for elective	-----
List of activities of student participation	<ol style="list-style-type: none"> 1) Visit to the flu corner and sample collection area. 2) To perform the proper sample collection and packing of the sample for RT-PCR test. 3) To visit the various sections of RT-PCR lab. 4) To prepare A4 size charts on basic steps of <ul style="list-style-type: none"> • PCR procedure. • Methods of RNA extraction. • Methods of Master mix preparation. 5) To prepare PPT on <ul style="list-style-type: none"> • The structure of COVID-19 virus. • Various diagnostic tests used for covid infection. • Various target genes for Covid RT-PCR test. • Types of COVID vaccines. 6) To demonstrate proper sequence of donning and doffing of each PPE. 7) Hands on practice to file SRF forms.

	8) Interpret the report for COVID-19 RT-PCR Test.
Learning resources	
Portfolio entries required	
Log book entry required	Successful completion of posting as certified in the log book “Meets expectation ‘M’ grade”
Assessment	<ul style="list-style-type: none"> 14. Attendance 15. Day to day participation in given activities 16. Presentation of e-poster
Other comments	-

NAME OF THE BLOCK	BLOCK 1
Name of the Elective	Urine examination -Chemical examination and microscopic examination.
Location of hospital lab or research facility	Dept. of Pathology Clinical path lab (Central lab)-GSMCH
Name of internal preceptor (s)	Dr. Richa Anand, Dr. Gurpreet Kaur
Name of external preceptor, if applicable	
Learning objectives of elective	<ol style="list-style-type: none"> 1) Document and receive samples for urine examination. 2) Process the samples for urine examination. 3) Perform chemical examination (Sugar/Protein/Ketone) on urine samples by reagent strip. 4) Perform microscopic examination of urine and look for cells/ casts/ crystals 5) Form a report and dispatch it.
Number of students that can be accommodated in this elective	6
Prerequisites for elective	<ol style="list-style-type: none"> 1) Familiar with universal safety precautions. 2) Necessary immunization. 3) Knowledge about the biomedical waste disposal guidelines, 2018.
List of activities of student participation	<ol style="list-style-type: none"> 1) Orientation to the working of the clinical path lab. 2) Documentation and receiving of urine samples 3) Processing of urine samples. 4) Chemical and microscopic examination of urine. 5) Correlation with available clinical history 6) Preparing a urine report
Learning resources	1) Henry's clinical diagnosis and management by laboratory methods 24 th e
Portfolio entries required	Yes. <ol style="list-style-type: none"> 1) Documentation of samples received and processed. 2) Documentation of number of chemical and microscopic examination performed. 3) Number of cases reported independently.
Log book entry required	Completion of posting signed by preceptor with 'meets expectation M grade'
Assessment	Formative

	<ol style="list-style-type: none">1) Attendance2) Performance of assisted task3) Presentation of the worked up cases4) Log book entry
Other comments	

Code: A19

NAME OF THE BLOCK	BLOCK 1
Name of the Elective	Hematology- Peripheral smear preparation and interpretation
Location of hospital lab or research facility	Dept. of pathology Hematology lab (Central lab) - GSMCH
Name of internal preceptor (s)	Dr. Jasmeet Kaur, Dr Pooja Badgujar
Name of external preceptor, if applicable	
Learning objectives of elective	<ol style="list-style-type: none"> 1) Receive and document the samples for peripheral smear examination. 2) Enumerate the indications for peripheral smear examination. 3) Prepare smear and stain slides for peripheral smear examination. 4) Perform DLC and RBC interpretation under supervision. 5) Differentiate the smears into various types of anaemia (based on RBC indices and smear examination), if applicable.
Number of students that can be accommodated in this elective	6
Prerequisites for elective	<ol style="list-style-type: none"> 1) Familiar with universal safety precautions. 2) Necessary immunization. 3) Knowledge about the biomedical waste disposal guidelines, 2018.
List of activities of student participation	<ol style="list-style-type: none"> 1) Orientation to lab environment. 2) Documentation and receiving of samples. 3) Preparation of smear for peripheral smear examination. 4) Staining of slides using leishman's stain 5) Performing DLC, platelet count and RBC morphology interpretation 6) Presentation: Peripheral smear preparation and staining/ Two cases of peripheral smears interpreted.
Learning resources	<ol style="list-style-type: none"> 1) Dacie and Lewis Practical Hematology, 12th e.
Portfolio entries required	Yes. <ol style="list-style-type: none"> 1) Documentation of number of smears prepared and stained. 2) Documentation of number of cases interpreted. 3) Presentation.
Log book entry required	Completion of posting signed by preceptor with 'meets expectation M grade'
Assessment	<ol style="list-style-type: none"> 1) Formative 2) Attendance 3) Performance of assisted task 4) Presentation 5) Log book entry
Other comments	

NAME OF THE BLOCK	BLOCK 1
Name of the Elective	Hematology - Receiving of samples
Location of hospital lab or research facility	Dept. of Pathology Hematology lab (Central lab)- GSMCH
Name of internal preceptor (s)	Dr. Neelanjana De, Dr. Pooja Badgujar.
Name of external preceptor, if applicable	
Learning objectives of elective	<ol style="list-style-type: none"> 1) To know about the various blood samples received in the hematology lab. 2) To know about the various anticoagulants. 3) To know about the rejection criteria of various samples 4) To know about the prerequisite documents, record keeping and BMW waste disposal of the samples
Number of students that can be accommodated in this elective	6
Prerequisites for elective	<ol style="list-style-type: none"> 1) Familiar with universal safety precautions. 2) Necessary immunization. 3) Knowledge about the biomedical waste disposal guidelines, 2018.
List of activities of student participation	<ol style="list-style-type: none"> 1) Orientation to the working of the Hematology lab. 2) Check the required documents (Requisition form) 3) Receiving blood samples in appropriate anticoagulant vial. 4) Accept/ reject a sample following the criteria for acceptance 5) Disposal of the samples following BMW guidelines. 6) Presentation on sample receiving prerequisites.
Learning resources	<ol style="list-style-type: none"> 1) Dacie and Lewis Practical Hematology, 12th e. 2) Henry's clinical diagnosis and management by laboratory methods 24th e
Portfolio entries required	Yes. <ol style="list-style-type: none"> 1) Documentation of sample rejection criteria 2) Documentation of the number of samples rejected. 3) Documentation of the presentations done
Log book entry required	Completion of posting signed by preceptor

	with 'meets expectation M grade'
Assessment	Formative 1) Attendance 2) Performance of assisted task 3) Log book entry
Other comments	

Code: A21

Name of Block	BLOCK 1 (A 21)
Name of Electives	Clinical Pharmacology - Dose adjustment in patients with compromised renal function
Location of Hospital lab or research facility	Department of Pharmacology
Name of Internal Preceptor (s)	Dr Prem Parkash Khosla, Dr Satish Sachdeva, Dr Shanu Raina, Dr. Balbir Kaur, Dr. Sonia Arora
Name of External Preceptor (if any)	None
Learning objective of the elective	<ol style="list-style-type: none">1. To list the therapeutic dose of commonly used drugs as in National Formulary of India2. To list drugs whose dose needs to be adjusted in compromised renal function3. To list different formula / Nomograms for dose adjustment4. To adjust dose in patients with compromised renal function
Number of students that can be accommodated in this elective	6
Prerequisites for the electives	Basic knowledge of Pharmacology
Learning resources for students	<ol style="list-style-type: none">1. National Formulary of India2. Tools for calculation of dose adjustment in patients with compromised renal function
List of activities in which the students will participate	<ol style="list-style-type: none">1. Ward rounds (Patients with decreased renal function)2. Identification of drugs in the treatment chart that need to be adjusted with decreased Creatinine Clearance3. Training to calculate adjusted dose using Nomograms / Excel programme for dose adjustments4. Training on casebased problems requiring dose adjustment5. Feedback to the consultant
Portfolio entries required	
Log Book entry required	Satisfactory completion of posting undersigned by preceptor with a 'Meets expectation' grade
Assessment	Attendance Formative assessment Record of activities in log book
Other comments	

Code: A22

Name of Block	BLOCK 1 (A22)
Name of Electives	Clinical Pharmacology - To scrutinize geriatric prescriptions and provide counseling for drugs of concern
Location of Hospital lab or research facility	Department of Pharmacology
Name of Internal Preceptor (s)	Dr Prem Parkash Khosla, Dr Satish Sachdeva, Dr Shanu Raina, Dr.Balbir Kaur, Dr.Sonia Arora
Name of External Preceptor(if any)	None
Learning objective of the elective	<ol style="list-style-type: none"> 1. To measure the anticholinergic and sedation burden 2. To understand the importance of reducing anticholinergic burden 3. To identify drugs causing postural fall, retention urine, CNS and cardiac emergency 4. To identify the risk of abrupt stoppage of medications 5. To identify drugs whose non-compliance causes metabolic, cardiac, or neurological emergency 6. To identify habitforming drugs 7. To provide counselling to the patients
Number of students that can be accommodated in this elective	6
Prerequisites for the electives	Basic Knowledge of Pharmacology
Learning resources for students	<ol style="list-style-type: none"> 1.General Pharmacology Concerns 2.Tools for sedation score Tools for Anticholinergic burden 3.Basic and Clinical Pharmacology by Katzung 4. National Formulary of India
List of activities in which the students will participate	<ol style="list-style-type: none"> 1.Screening of prescriptions for <ul style="list-style-type: none"> • Anticholinergic burden, Sedation score • Metabolic,cardiac, or neurological emergency due to non-compliance • Habit forming drugs 2. Providing counselling to the patients 3. Feedback to the consultant 4. Case Presentations
Portfolio entries required	
Log Book entry required	Satisfactory completion of posting undersigned by preceptor with a 'Meets expectation' grade
Assessment	Attendance Formative assessment Record of activities in log book
Other comments	

Code: A23

Name of Block	BLOCK 1 (A 23)
Name of Electives	Pharmacovigilance - To identify, report and assess the severity, causality and preventability of ADRs
Location of Hospital lab or research facility	Department of Pharmacology, GSMCH
Name of Internal Preceptor (s)	Dr Prem Parkash Khosla, Dr Shanu Raina , Dr.Balbir Kaur ,Dr.Sonia Arora, Dr.Satwinder Singh
Name of External Preceptor(if any)	None
Learning objective of the elective	<ol style="list-style-type: none">1. To understand the principles of Pharmacovigilance2. To take complete drug history3. To identify an ADR and report the same using appropriate ADR reporting form4. To assess the severity, causality, and preventability of ADRs5. To identify drug-drug and drug -food interactions
Number of students that can be accommodated in this elective	6
Prerequisites for the electives	Basic knowledge of Pharmacology
Learning resources for students	<ol style="list-style-type: none">1.Pharmacovigilance Programme of India2.Tools for assessment<ul style="list-style-type: none">• WHO Causality Assessment Scale• Hartwig Severity Scale• Schumock and Thornton Preventability Scale3.Basic and Clinical Pharmacology by Katzung
List of activities in which the students will participate	<ol style="list-style-type: none">1. Collection of ADRs2. Filling up of the ADR reporting form3. Assessing the causality, severity, and preventability of the ADR4. Case presentation
Portfolio entries required	
Log Book entry required	Satisfactory completion of posting undersigned by preceptor with a 'Meets expectation' grade
Assessment	Attendance Formative assessment Record of activities in log book
Other comments	

Code: A24

Name of Block	BLOCK 1 (A 24)
Name of Electives	Physiology- Electrophysiology of Heart (Cardiovascular System)
Location of Hospital lab or research facility	Department of Physiology
Name of Internal Preceptor (s)	Dr. Sanju Goel, Dr. Manpreet Singh
Name of External Preceptor(if any)	None
Learning objective of the elective	<ol style="list-style-type: none">1) At the end of the module students should be able to properly hand & use the electro cardiogram machine2) Must develop the skill about the usage & application of all the attached electrodes of the machine.3) Must accurately follow safety precautions while doing ECG.4) About the proper disposal of used cotton following the biomedical waste disposal rule.5) Know about how to interpret the ECG.
Number of students that can be accommodated in this elective	6
Prerequisites for the electives	Candidates find ways have prior knowledge of functional anatomy & electrophysiological properties of heart.
Learning resources for students	<ol style="list-style-type: none">1) Participate & assist in clinical lab performing ECG test.2) Single channel electrocardiogram machine.
List of activities in which the students will participate	<ol style="list-style-type: none">1) The ECG made easy John Hampton practical guide to ECG.2) Golwalla's electrocardiography for medical students and general practitioners.
Portfolio entries required	<ol style="list-style-type: none">1) No. Of ECGs recorded independently2) Clinical correlation of the findings of ECGs records.
Log Book entry required	Satisfactory completion of posting undersigned by preceptor with a 'Meets expectation' grade
Assessment	<ol style="list-style-type: none">1) Seminar presentation/ PPT.2) Assessment by independent performance and interpretation of the test results.
Other comments	

Code: A25

Name of Block	BLOCK 1 (A 25)
Name of Electives	Physiology- Haematology
Location of Hospital lab or research facility	Department of Physiology
Name of Internal Preceptor (s)	Dr. Babita Bansal, Dr. Jaspreet Takkar
Name of External Preceptor(if any)	None
Learning objective of the elective	<p>At the end of the module students should be able to develop skill about the proper handling & useage of laboratory equipment with safe and disposal methods for biomedical waste generated in haematology lab.</p> <ol style="list-style-type: none">1) Develop adequate skill for collecting blood samples as per standard lab protocol.2) Develop adequate skill for performing essential haematology procedures relevant to common disorder (clinical)3) Develop essential skill to interpret the result of the essential haematological procedures.
Number of students that can be accommodated in this elective	6
Prerequisites for the electives	Candidates should have prior knowledge of universal precautions and safe lab practices.
Learning resources for students	Wintrobe's clinical haematology bt John.P.Sreer.
List of activities in which the students will participate	Participate and assist in routine haematology practical demonstrations.
Portfolio entries required	<ol style="list-style-type: none">1) Number of Blood samples collected.2) No. Of haematology tests done.3) Clinical correlation of the findings of haematology tests done.
Log Book entry required	Satisfactory completion of posting undersigned by preceptor with a 'Meets expectation' grade
Assessment	<ol style="list-style-type: none">1) Seminar presentation about common haematology disorders.2) Assessment by independent performance and interpretation of the test results.
Other comments	

Code: A26

Name of Block	BLOCK 1 (A 26)
Name of Electives	Physiology- Respiratory Physiology
Location of Hospital lab or research facility	Department of Physiology
Name of Internal Preceptor (s)	Dr. Manpreet Singh, Dr. Sanju Geol
Name of External Preceptor(if any)	None
Learning objective of the elective	<ol style="list-style-type: none">1) At the end of the module students should be able to handle & operate computerized Spiro excel, instruments & software.2) Students should be able to properly dispose used mouth pieces.3) Should be able to properly dispose off biomedical waste generated.4) Develop adequate skill for performing computerised Spirometry on subjects.5) Develop technical knowledge & skill to interpret the results of the Spirometry.6) Develop understanding to correlate the results with relevant clinical scenario.
Number of students that can be accommodated in this elective	6
Prerequisites for the electives	<ol style="list-style-type: none">1) Participate & assist in clinical labs for Spirometry functions.2) Basic knowledge of pulmonary function tests.
Learning resources for students	Spirometry by Dr. Behera McGraw Hill's Pocket Guide to Spirometry
List of activities in which the students will participate	Participate and assist in clinical lab for spirometric functions Computerised spirometer.
Portfolio entries required	<ol style="list-style-type: none">1) No. Of computerized Spirometry done independently.2) Clinical correlation of the findings of computerized Spirometry tests.
Log Book entry required	Satisfactory completion of posting undersigned by preceptor with a 'Meets expectation' grade
Assessment	<ol style="list-style-type: none">1) Seminar presentation /PPT.2) Assessment by independent performance and interpretation of the test results.
Other comments	