



**Royal Medical Services**

**Professional Training Division**

**Logbook for clinical pathology/microbiology  
Residents**

## **Explanatory Notes**

This is an important document. The logbook is an integral part of basic training and it will provide a record of your experience and your academic and educational activities. It will be part of your assessment as you move through basic training and it will be required for the final year of residency and Board examination.

This logbook is intended to be a record of all procedures you perform or participate in as part of your training.

### **Training Posts Held**

On this page you are required to list, in chronological order, the posts which you have held during residency program at the completion of each post, the trainer or consultant to whom you have been attached must sign to indicate that you have satisfactorily completed the post. When you apply to sit the final assessment, the trainer or consultant with whom you are attached will verify that the log book is complete and authenticated.

You must record the fact that you have sat for and succeeded the basic board examination. A copy of the Jordan Medical Council Primary board certificate should be included with your logbook. On this sheet, records of attendance at other training courses, meetings, and lectures should be recorded. It is not intended that you record educational activities within the unit to which you are attached. Publications and other personal contributions should be included as well as any involvement in research projects.

The logbook is divided into numbered segments, corresponding to the training posts held. Details of your record of practical procedures should be completed for each of these posts. There is a consolidation page to summarize the record of procedures performed.

### **Personal details:**

Full Name in Arabic:

Full name in English:

National number:

Start date of your residency program:

Your signature: \_\_\_\_\_

Head of the Department: \_\_\_\_\_

Signature & Stamp: \_\_\_\_\_ Date: \_\_\_\_\_

## Training Posts Held

Post Number	Division	Residency Year	Start Date	Finish Date	Consultant	Consultant signature
1 <sup>st</sup>						
2 <sup>nd</sup>						
3 <sup>rd</sup>						
4 <sup>th</sup>						
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19 <sup>th</sup>						
20 <sup>th</sup>						

This form should only be signed by the consultant or trainer at the end of the post, provided that the trainee has finished the period of the training satisfactorily.





# ***Microbiology department :***

## **Clinical microbiology residents**

### **First year:**

Duration of training: 3 months

Date	
One month	1- General overview the microbiology laboratory sections. 2- safety rules in Microbiology and principles of sterilization. 3-recognize the types of specimens. 4-the knowledge of the main criterias for accepting and rejection of samples. 5- Microscopical examination of specimens, do Gram ,ZN staining. 6- cultivation of bacteria ,know the different kinds of culture media 7- Bacterial identification methods, and antibiotic sensitivity testing.
One month	Processing of urine and stool specimens , see colonial morphology ,do gram staining , biochemical identification , sensitivity testing .
One month	Processing of blood culture and CSF culture Processing of pus , wound , sputum culture etc Processing sputum samples for TB , DO ZN Stain .

Clinical microbiology residents  
Second year:

Duration of training: 6 months

Date	
First month & Second month	Apply direct detection methods ,cultivate ,Process urine and stool specimens , see colonial morphology ,do gram staining , biochemical identification , sensitivity testing
3 <sup>rd</sup> month & 4 <sup>th</sup> month	Processing of blood culture and CSF culture
5 <sup>th</sup> month	Processing of pus , wound , sputum culture etc Processing sputum samples for TB , DO ZN Stain .
6 <sup>th</sup> month	Processing sputum samples for TB , DO ZN Stain Overview on viral diagnostic methods by PCR

Clinical microbiology residents  
Third year:

Duration of training 8 months

ROTATION	DURATION
Reading and processing of culture and antibiotic susceptibility	
Blood and CSF culture	2 months
Urine ,genitourinary and gastrointestinal specimens	2 months
Wound ,respiratory specimens, mycology	2 months
Isolation and identification of mycobacteria	1 month
Vral diagnostic methods	2 weeks
Parasitology	2 weeks

Clinical microbiology residents  
Fourth year:

Duration of training 12 months

ROTATION	DURATION
Reading and processing of culture and antibiotic susceptibility	
Blood and CSF culture	3 months
Urine ,genitourinary and gastrointestinal specimens	3 months
Wound ,respiratory specimens, mycology	4 months
Isolation and identification of mycobacteria	1 month
Vral diagnostic methods	2weeks
Parasitology	2 weeks

**Note:** 1-Scientific lectures and seminars all through the year.  
2-group discussions  
3- assigned clinical / lab exercises  
4-undergraduate teaching assignments  
5-attending microbiology workshop and conferences.  
6- Attendance of clinical infectious disease rounds to discuss relevant cases.



## Microbiology resident program in others clinical pathology departments :

### **First year :**

**Duration of training: 3 months in each department .**

### Hematology rotation :

Date	
At start of period	1- General overview of all lab tests in the hematology laboratory.
Two months	2-Performing routine tests like automated CBC and differential with ESR
Two weeks	3- Performing general coagulation tests
Two weeks	4- Performing general blood bank tests like blood grouping and coomb's test

### Clinical chemistry

#### 1- Reception and specimen separation

- Identify all types of tests and the nature of the sample required for each test
- Identify all kinds of tubes and components and what tests can work for each type
- Identify all kinds of specimen separation and distribution of samples on different Sections
- Identify errors associated with the samples (errors pre-analysis) and ways to Dispose of the samples violation.

#### 2- Division of Special tests

- Identify all the chemical methods of analysis and its applications and advantages of each method
- Identifying the special tests and methods of work
- Identify the available devices and the principle of its work
- Follow-up errors that may occur in the patient samples or their results
- The study of diseases that require these tests.
- Supervising the test results.

#### 3- Automated tests Division

- Identify the available devices and ways of working and calibrated
- Identify the different working methods of the tests
- Identify errors that may occur for different samples and methods of solution.
- Recognize the results of various medical tests and their suitability for the diagnosis of patients.

#### 4- Division of hormonal tests

- Identify the available devices and ways of working and calibrated
- Identify ways the work of the various tests and errors that may get the

Samples and methods of solution.

- Identify the tumor markers and drugs and appropriateness of the results  
With diagnosis.

5- Division of genetic tests

- Identify the available devices and ways of working and calibrated.
- Identify errors that may get the samples and methods of solution.

### Immunology department

Date	
One month	1- General overview of all lab tests in the immunology laboratory.  2-Performing routine tests and latex agglutination tests( RF, CRP, ASOT, Brucella screening and titer , monospot test for EBV, pregnancy test and Bence- Jones proteins)  3- interpretation of routine test and latex agglutination tests
One month	1- To learn how to setup, evaluate and interpret clinical immunology procedures  2- Observe serology tests with attention to methodology principles, QC, safety, troubleshooting problems. 3-Performing ELISA tests and interpretation of results
One month	1-Interpretation of blood bank results including hepatitis HBsAg, HCV Ab, HIV Ab, RPR. 2- Performing and reading indirect immunofluorescence slides (ANA, AMA, ASMA, Anti- dsDNA, LKM1, ANCA) 3-Analysis of SPE and immunofixation results and correlation with clinical picture. 4- Review the abnormal results daily, check for discrepant results.

## Second year :

**Duration of training: 2 months in each department.**

### Hematology:

Date	
Two weeks	1- Performing routine tests like automated CBC and differential with ESR
Two weeks	2- Reading and interpretation of peripheral blood smears for cases of anemia and reactive disorders of both granulocytes and platelets
Two weeks	3- Performing and interpretation of general coagulation tests.
Two weeks	4- Performing and interpretation of general blood bank tests like blood grouping and coomb's test

### Clinical chemistry:

#### 1- Automated tests division

- Study of the working methods of automated analysis equipment, review and work on these devices.
- Study of the working methods of the laboratory tests.
- Study results of the tests and work to confirm it.

#### 2- Special tests division

- study devices used in manual analysis and principles of work and work on it.
- Study the required tests and their suitability for the diagnosis of patients.
- Study tests for organ transplant patients and their applications (cyclosporine, prograf, rapamune, methotrexate)

#### 3- Division of hormonal tests

- Study of the working methods of automated analysis equipment and reviewed and work on these devices.
- Interpretation results of hormonal tests and confirmation.

#### 4- Division of genetic chemistry tests

- Identify how to work on these devices.
- Identify the different ways to prepare the tests.

## Immunology department

Date	
One month	<p>1- General overview of all lab tests in the immunology laboratory.</p> <p>2-Performing routine tests and latex agglutination tests( RF, CRP, ASOT, Brucella screening and titer , monospot test for EBV, pregnancy test and Bence- Jones proteins)</p> <p>3- interpretation of routine test and latex agglutination tests</p> <p>4- Observe serology tests with attention to methodology principles, QC, safety, troubleshooting problems.</p>
One month	<p>1- To learn how to setup, evaluate and interpret clinical immunology procedures</p> <p>2- Performing and reading indirect immunofluorescence slides (ANA, AMA, ASMA, Anti- dsDNA, LKM1, ANCA)</p> <p>3-Analysis of SPE and immunofixation results and correlation with clinical picture.</p> <p>4-Performing ELISA tests and interpretation of results</p> <p>5- Review the abnormal results daily, check for discrepant results.</p> <p>6- Analysis of SPE and immunofixation results and correlation with clinical picture.</p>

## **Third year**

**Duration of training: 1 month in each department.**

### **Hematology:**

Date	
One week	<p>1- Performing routine tests like automated CBC and differential with ESR with reading and interpretation of peripheral blood smears for cases of anemia and reactive disorders of both granulocytes and platelets and common leukemias</p> <p>2- Observe special tests done in the department including hemoglobin electrophoresis and flow cytometry with attention to methodology principles , QC, safety, trouble shooting problems</p> <p>3- Performing and interpretation of general coagulation tests.</p> <p>4- Performing and interpretation of general blood bank tests like blood grouping and coomb's tests.</p>
One week	
One week	
One week	

**Clinical chemistry**

- 1- Reading and interpretation of results: automated general test, special tests, hormonal tests, genetic chemistry test.
- 2- Confirmation of the results

**Immunology department**

Date	
One month	<ol style="list-style-type: none"><li>1- General overview of all lab tests in the immunology laboratory.</li><li>2- To learn how to setup, evaluate and interpret clinical immunology procedures</li><li>3-Performing routine tests and latex agglutination tests( RF, CRP, ASOT, Brucella screening and titer , monospot test for EBV, pregnancy test and Bence- Jones proteins)</li><li>4- interpretation of routine test and latex agglutination tests</li><li>5- Observe serology tests with attention to methodology principles, QC, safety, troubleshooting problems.</li><li>6- - Performing and reading indirect immunoflourescence slides (ANA, AMA, ASMA, Anti- dsDNA, LKM1, ANCA)</li><li>7- Performing ELISA tests and interpretation of results</li><li>8- Review the abnormal results daily, check for discrepant results.</li><li>9- Analysis of SPE and immunofixation results and correlation with clinical picture.</li><li>10- Observe HLA typing and interpretation</li></ol>

# ***Microbiology department :***

## **Stain techniques :**

Year of residency	Wet mount preparation		(Gram stain)		Methylene blue stain		Ziehl-Neelsen stain	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year								
2 <sup>d</sup> year								
3 <sup>d</sup> year								
4 <sup>th</sup> year								

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**Cerebrospinal fluid culture:**

Year of residency	specimen processing performed	negative growth cultures seen	Positive Growth cultures seen	Identification and sensitivity performed	
				identification	sensitivity
1 <sup>st</sup> year					
2d year					
3d year					
4 <sup>th</sup> year					

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**Blood culture:**

Year of residency	specimen processing performed	Wet mount preparation seen	Negative cultures seen	Positive Growth cultures seen	Identification and sensitivity performed	
					identification	sensitivity
1 <sup>st</sup> year						
2d year						
3d year						
4 <sup>th</sup> year						

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## Swab culture:

Year of residency	Throat swab		Nasal swab		Ear swab		Wound swab	
	processed	Interpret	Processed	Interpret	Processed	Interpret	processed	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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Year of residency	Axillary's swab		High vaginal swab		Eye swab		Miscellaneous swabs	
	processed	Interpret	Processed	Interpret	Processed	Interpret	processed	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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## **Fluid culture:**

Year of residency	Ascitic fluid		Pericardial fluid		Peritoneal fluid		Pleural fluid	
	processed	Interpret	Processed	Interpret	Processed	Interpret	processed	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

Year of residency	Synovial fluid		Pericardial fluid		Peritoneal fluid		Pleural fluid	
	processed	Interpret	Processed	Interpret	Processed	Interpret	processed	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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## ***Pus culture:***

Year of residency	Urethral discharge				Brain abscess			
	Microscopy	cultivation	interpretation	reporting	Microscopy	cultivation	interpretation	reporting
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

Year of residency	Liver abscess				Miscellaneous abscess			
	Microscopy	cultivation	interpretation	reporting	Microscopy	cultivation	interpretation	reporting
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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**Lower respiratory specimens:**

Year of residency	Sputum specimens				Brochoalveolar lavage specimens			
	Microscopy	cultivation	interpretation	reporting	Microscopy	cultivation	interpretation	reporting
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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**Mycobacterium :**

Year of residency	Sample processing	z-n stain for screening		Auramine stain		Positive cultures	
		prepared	positive	Prepared	positive	z-n stain	reporting
1 <sup>st</sup> year							
2d year							
3d year							
4 <sup>th</sup> year							

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# Virology :

Year of residency	<i>Cytomegalovirus In urine</i>		<i>Cytomegalovirus In blood</i>		<i>Epstein-Barr Virus In blood</i>		<i>Herpes simplex virus 1</i>	
	processed	Interpret	Processed	Interpret	Processed	Interpret	processed	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

Year of residency	<i>Herpes simplex virus 2</i>		<i>Enterovirus In csf</i>		Tuberculosis	
	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year						
2d year						
3d year						
4 <sup>th</sup> year						

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## **Media preparation:**

<b>Year of residency</b>	<b>Blood medium prepared</b>	<b>Chocolate medium prepared</b>	<b>MacConkey media prepared</b>	<b>Cled medium prepared</b>
1 <sup>st</sup> year				
2d year				
3d year				
4 <sup>th</sup> year				

<b>Year of residency</b>	<b>TSI medium prepared</b>	<b>Citrate medium prepared</b>	<b>SIM medium prepared</b>	<b>Urease medium prepared</b>
1 <sup>st</sup> year				
2d year				
3d year				
4 <sup>th</sup> year				

<b>Year of residency</b>	<b>Thioglycolate medium prepared</b>		<b>Selenite medium prepared</b>		<b>S .S medium prepared</b>		<b>Deoxycholate medium prepared</b>	
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

<b>Year of residency</b>	<b>Muller hinton medium prepared</b>	<b>Sabouraud medium prepared</b>	.....	.....
1 <sup>st</sup> year				
2d year				
3d year				
4 <sup>th</sup> year				

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**Mycology culture:**

Year of residency	Specimens processed		KOH preparation		Wet mount preparation		reporting	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	identify	sensitivity
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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**Parasitology:**

Year of residency	Specimens processed		Normal saline preparation		Iodine preparation		Reporting
	Stool	genital	Perform	Interpret	Perform	Interpret	
1 <sup>st</sup> year							
2d year							
3d year							
4 <sup>th</sup> year							

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Year of residency	.....		.....		.....		.....	
	process	interpret	Process	Perform	Perform	Interpret	Perform	interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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**Seminars and lectures :**

Year of residency	<i>Discussions attendance</i>	<i>Lectures presentation</i>
1 <sup>st</sup> year		
2d year		
3d year		
4 <sup>th</sup> year		

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## IMMUNOLOGY DEPARTMENT

### Routine tests

Year of residency	RF (NUMBER)		CRP (NUMBER)		ASOT (NUMBER)		Brucella(Rose Bengal) (NUMBER)	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

Year of residency	Brucella (Wright)- (N)		Bence-Jones protein- (N)		Monospot test		Early pregnancy test	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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### BLOOD BANK TESTS

Year of residency	HBsAg		HBcAb		HCV-Ab		HIV-Ab	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								









**CONNECTIVE TISSUE DISEASE TESTS AND VASCULITIS SCREEN**

Year of residency	ANA		dsDNA		ENA		ANCA	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year								
2 <sup>d</sup> year								
3 <sup>d</sup> year								
4 <sup>th</sup> year								

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**LIVER AUTOIMMUNITY RELATED TESTS**

Year of residency	ASMA		AMA		LKM1		SLA	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year								
2 <sup>d</sup> year								
3 <sup>d</sup> year								
4 <sup>th</sup> year								

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## ELECTROPHORESIS

Year of residency	Serum protein electrophoresis		CSF electrophoresis		URINE electrophoresis		Immunofixation	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								

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## HUMAN LEUKOCYTE ANTIGEN TYPING AND CYTOTOXIC ANTIBODIES.

Year of residency	HLA-TYPING A-B-C		HLA-TYPING B5- B27		CYTOTOXIC ANTIBODIES		PANEL REACTIVE ANTIBODIES	
	Perform	Interpret	Perform	Interpret	Perform	Interpret	Perform	Interpret
1 <sup>st</sup> year								
2d year								
3d year								
4 <sup>th</sup> year								







**Clinical chemistry rotation**

Practical skills year of residency	centrifugation& Specimen separation	Specimen collection
First year (number)		
Second year (number)		
Third year (number)		
Fourth year (number)		

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**Kidney function panel**

Test year of residency	Na	K	Creatinine	Urea
First year (number)				
Second year (number)				
Third year (number)				
Fourth year(number)				

### Hepatic Function Panel

Test year of residency	Albumin	total Bilirubin	direct Bilirubin	total Protein	ALP	AST	ALT
First year (number)							
Second year (number)							
Third year (number)							
Fourth year(number)							

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### Cardiac markers panel

Test year of residency	Total CK	CK-MB	Troponin I	LDH
First year (number)				
Second year (number)				
Third year (number)				
Fourth year(number)				











**Tumor markers panel**

Test year of residency	CEA	Free PSA	Total PSA	$\alpha$ -Fetoprotein	CA125	CA19.9	CA15.3
First year (number)							
Second year (number)							
Third year (number)							
Fourth year(number)							

Test year of residency	CA 242	CA 72-4		
First year (number)				
Second year (number)				
Third year (number)				
Fourth year(number)				

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**Special test panel**

Test year of residency	Zinc	Magnesium	Ammonia	G6PD	Copper	SEROTONIN	Histamine
First year (number)							
Second year (number)							
Third year (number)							
Fourth year(number)							

Test year of residency	<b>METANEPHRINE S</b>	<b>METHYLMALONIC ACID</b>	<b>Norepinephrine</b>	<b>Osmolality</b>	<b>Phosphate</b>
First year (number)					
Second year (number)					
Third year (number)					
Fourth year(number)					

Test year of residency	<b>Stone Analysis</b>	<b>Uroporphyrins</b>	<b>Valproic Acid</b>	<b>VMA Urine 24 Hrs</b>	<b>Acetone</b>	<b>Acid Phosphatase</b>	<b>Amino Acids</b>
First year (number)							
Second year (number)							
Third year (number)							
Fourth year(number)							

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**Drugs and toxic materials**

Test year of residency	Acetaminophen	Amikacin	ANTICONVALESANTS	BARBITURATES	BENZODIAZEPINE
First year (number)					
Second year (number)					
Third year (number)					
Fourth year(number)					

Test year of residency	Cyclosporine	Digoxin	Gentamicin	Heparin	Methotrexate	OPIATES
First year (number)						
Second year (number)						
Third year (number)						
Fourth year(number)						

Test year of residency	Phenobarbital	Phenytoin	Prograf	Salicylate	Theophylline	Tobramycin
First year (number)						
Second year (number)						
Third year (number)						
Fourth year(number)						





## Vitamins

Test year of residency	Vitamin B 1	Vitamin B 6	Vitamin B12	Vitamin B2	Vitamin D, 1,25 Dihydroxy	Vitamin D3
First year (number)						
Second year (number)						
Third year (number)						
Fourth year(number)						

Test year of residency	Vitamin E	Vitamin K1	Folate	Ferritin	Iron	
First year (number)						
Second year (number)						
Third year (number)						
Fourth year(number)						





**Supervisor name and signature**

**First year: Immunology department:** -----

**Microbiology department:** -----

**Hematology department:** -----

**Clinical chemistry department:** -----

**Second year: Immunology department:** -----

**Microbiology department:** -----

**Hematology department:** -----

**Clinical chemistry department:** -----

**Third year: Immunology department:** -----

**Microbiology department:** -----

**Hematology department:** -----

**Clinical chemistry department:** -----

**Fourth year: microbiology department:** -----

**Program director name and signature**

**First year:** -----

**Second year:** -----

**Third year:** -----

**Fourth year:** -----

**Chief of department name and signature**

**First year:** -----

**Second year:** -----

**Third year:** -----

**Fourth year:** -----