

**One Year Post Graduate Diploma In Medical  
Diagnostic Ultrasound  
(General Track)  
Semester 2  
Weekly Planner**



# Semester 2

**Course Name: Vascular Ultrasound**

**Course Director: Prof. Dr. Syed Amir Gilani (PhD)**

**Course Code: PGDG-7106**

**Teaching Faculty**

1-Prof. Dr. Syed Amir Gilani (PhD)

2-Associate Prof. Dr. Raham Bacha (PhD)

<b>Weeks</b>	<b>Course Content</b>
<b>Week 1</b>	Hemodynamics-(1)
<b>Week 2</b>	Color Doppler of neck vessels-(1)
<b>Week 3</b>	Color Doppler of abdominal vessels-(1)
<b>Week 4</b>	<b>Quiz &amp; Assignment</b>
<b>Week 5</b>	Color Doppler in abdominal visceral vessels
<b>Week 6</b>	Renal artery Doppler-(1)
<b>Week 7</b>	Upper limb Arterial Doppler-(1)
<b>Week 8</b>	<b>Quiz &amp; Assignment</b>
<b>Week 9</b>	Lower limb Arterial Doppler-(1)
<b>Week 10</b>	Small parts Doppler-(1)
<b>Week 11</b>	Color Doppler in Gynaecology-(1)
<b>Week 12</b>	Color Doppler in obstetrics-(1)
<b>Week 13</b>	<b>Quiz &amp; Assignment</b>
<b>Week 14</b>	Lower Limb Venous Doppler-(1)
<b>Week 15</b>	Upper Limb Venous Doppler-(1)
<b>Week 16</b>	<b>Final Exam</b>

# Semester 2

**Course Name: Medical Ethics**

**Course Director: Prof. Dr. Syed Amir Gilani**

**Course Code: PGDG-7107**

**Teaching Faculty**

1: Prof. Dr. Syed Amir Gilani (PhD)

<b>Weeks</b>	<b>Course Content</b>
<b>Week 1</b>	Introduction to Medical Ethics-(1)
<b>Week 2</b>	Informed Consent-(1)
<b>Week 3</b>	Confidentiality and Privacy-(1)
<b>Week 4</b>	<b>Quiz &amp; Assignment</b>
<b>Week 5</b>	Allocation of scarce resources-(1)
<b>Week 6</b>	Human subjects and research ethics-(1)
<b>Week 7</b>	Contemporary Ethical Challenges-(1)
<b>Week 8</b>	<b>Quiz &amp; Assignment</b>
<b>Week 9</b>	Definition and importance of patient safety-(1)
<b>Week 10</b>	Role of organizational culture in patient safety-(1)
<b>Week 11</b>	Patient Safety Reporting and Analysis-(1)
<b>Week 12</b>	Medication Safety-(1)
<b>Week 13</b>	<b>Quiz &amp; Assignment</b>
<b>Week 14</b>	Quality Improvement in Healthcare-(1)
<b>Week 15</b>	Simulation and Team Training-(1)
<b>Week 16</b>	Final Exam

# Semester 2

**Course Name: Musculoskeletal Ultrasound**

**Course Director: Prof. Dr. Syed Amir Gilani**

**Course Code: PGDG-7108**

**Teaching Faculty**

Prof. Dr. Syed Amir Gilani (PhD)

<b>Weeks</b>	<b>Topics</b>
<b>Week 1</b>	Introduction to musculoskeletal ultrasound
<b>Week 2</b>	Ultrasound of tendons
<b>Week 3</b>	Ultrasound of ligaments
<b>Week 4</b>	<b>Quiz &amp; Assignment</b>
<b>Week 5</b>	Ultrasound of muscles
<b>Week 6</b>	Ultrasound of bones
<b>Week 7</b>	Ultrasound of peripheral nerves
<b>Week 8</b>	<b>Quiz &amp; Assignment</b>
<b>Week 9</b>	Ultrasound of shoulder joint
<b>Week 10</b>	Ultrasound of elbow joint
<b>Week 11</b>	Ultrasound of wrist joint
<b>Week 12</b>	Ultrasound of hand
<b>Week 13</b>	<b>Quiz &amp; Assignment</b>
<b>Week 14</b>	International Procedures of Musculoskeletal system
<b>Week 15</b>	Color Doppler of Musculoskeletal system
<b>Week 16</b>	<b>Final Exam</b>

# Semester 2

**Course Name: Small Parts Ultrasound**

**Course Director: Associate Prof. Dr. Raham Bacha**

**Course Code: PGDG-7109**

**Teaching Faculty**

1: Prof. Dr. Syed Amir Gilani (PhD)

2: Associate Prof. Dr. Raham Bacha (PhD)

<b>Weeks</b>	<b>Course Content</b>
<b>Week 1</b>	Major Neck Vessels-(1)
<b>Week 2</b>	The Thyroid Gland-(2)
<b>Week 3</b>	Thyroid Pathology-(2)
<b>Week 4</b>	<b>Quiz &amp; Assignment</b>
<b>Week 5</b>	Vascular Pathology
<b>Week 6</b>	Penile Ultrasound-I-(1)
<b>Week 7</b>	Penile Ultrasound-I-(1)
<b>Week 8</b>	<b>Quiz &amp; Assignment</b>
<b>Week 9</b>	Penile Anatomy-(2)
<b>Week 10</b>	Penile Pathologies
<b>Week 11</b>	The Scrotum(I)
<b>Week 12</b>	The Scrotum(II)-(1)
<b>Week 13</b>	<b>Quiz &amp; Assignment</b>
<b>Week 14</b>	Interventional procedures in Beas-(2)
<b>Week 15</b>	Interventional procedures in Scrotum-(2)
<b>Week 16</b>	<b>Final Exam</b>

# Semester 2

**Course Name: Interventional Ultrasound & Patient Safety**

**Course Director: Prof. Dr. Syed Amir Gilani**

**Course Code: PGDG-7110**

**Teaching Faculty**

1: Prof. Dr. Syed Amir Gilani (PhD)

2: Associate Prof. Dr. Raham Bacha (PhD)

<b>Weeks</b>	<b>Topics</b>
<b>Week 1</b>	Introduction to Interventional Ultrasound-(1)
<b>Week 2</b>	Vascular Access Procedures-(2)
<b>Week 3</b>	Renal biopsy and interventions-(1)
<b>Week 4</b>	<b>Quiz &amp; Assignment</b>
<b>Week 5</b>	Musculoskeletal Interventions-(1)
<b>Week 6</b>	Thoracic Interventions-(2)
<b>Week 7</b>	Joint aspirations and injections(2)
<b>Week 8</b>	<b>Quiz &amp; Assignment</b>
<b>Week 9</b>	Introduction to patient safety concepts
<b>Week 10</b>	Effective communication in healthcare
<b>Week 11</b>	<b>Quiz &amp; Assignment</b>
<b>Week 12</b>	Medical Errors and Adverse Events-(2)
<b>Week 13</b>	Infection Control and Sterilization-(1)
<b>Week 14</b>	Ultrasound safety and bioeffects-(2)
<b>Week 15</b>	Case studies and best practices-(2)
<b>Week 16</b>	<b>Final Exam</b>

# Semester 2

**Course Name: Advances in Ultrasound**

**Course Director: Prof. Dr. Syed Amir Gilani (PhD)**

**Course Code: PGDG-7111**

**Teaching Faculty**

1: Prof. Dr. Syed Amir Gilani (PhD)

2: Associate Prof. Dr. Raham Bacha (PhD)

<b>Week</b>	<b>Course Content</b>
<b>Week 1</b>	Introduction to Advances in Ultrasound Technology-(1)
<b>Week 2</b>	Physics and Principles of Ultrasound Imaging-(2)
<b>Week 3</b>	Obstetric Ultrasound Imaging-(1)
<b>Week 4</b>	<b>Quiz &amp; Assignment</b>
<b>Week 5</b>	Abdominal Ultrasound Imaging-(1)
<b>Week 6</b>	Diagnosis and intervention in musculoskeletal disorders--(1)
<b>Week 7</b>	Basics of echocardiography & Introduction to cardiac imaging modalities-(2)
<b>Week 8</b>	<b>Quiz &amp; Assignment</b>
<b>Week 9</b>	Ultrasound-guided procedures in biopsy and drainage-(2)
<b>Week 10</b>	Advances in minimally invasive interventions & Case studies and practical applications-(2)
<b>Week 11</b>	Principles of Doppler ultrasound & Color flow imaging techniques-(1)
<b>Week 12</b>	<b>Quiz &amp; Assignment</b>
<b>Week 13</b>	The role of artificial intelligence in ultrasound diagnostics-(2)
<b>Week 14</b>	Advanced Cardiac Imaging-(2)
<b>Week 15</b>	Advanced Cardiac Imaging-(2)
<b>Week 16</b>	<b>Final Exam</b>