



ISUOG BT FLEX PROGRAM

4 weeks: Monday 31 October – Saturday 26 November 2022

WEEK 1: Monday 31 October – Saturday 6 November 2022

Monday 31 October – Friday 5 November: Study plan:

BT Flex week 1 study components: Monday 31 October to Saturday 6 November			
Lectures [ESSENTIAL]	Practical instruction videos [ESSENTIAL]	Further reading [SUGGESTED]	Approximate study time
Monday 31 October			
<p><i>Lecture 1:</i> Physical principles of ultrasound including safety</p> <p><i>Lecture 2:</i> Transducers, image production, knobology & scanning planes TA & TV</p>	<p>The principles of ultrasound</p> <p>ISUOG - Plan your movements and improve your image</p> <p>Practical Demo: live demonstration with trainee, demonstration knobology (From BT Flex 2021 by Divya Singh)</p>		1 hour and 20 minutes
Tuesday 1 November			
<p><i>Lecture 3:</i> The principles of Doppler ultrasound*</p>	<p>Practical Demo: Measurement of uterine artery Doppler:</p> <p>Practical demo: of Doppler principles (From BT Flex 2021 by Suresh Seshadri)</p>	<p><i>Ultrasound in Obstetrics and Gynecology: A practical approach</i> [Chapters 1-3]</p>	50 minutes
Wednesday 2 November			
<p><i>Lecture 4:</i> Quality control processes for operators & programmes*</p> <p><i>Lecture 5:</i> Informed consent, image recording and report writing</p>	<p>Train the Basic Training trainee - How to prepare and counsel the patient</p>		1 hour
Thursday 3 November			
<p><i>Lecture 6:</i> Assessing the normal pregnancy between 4 and 10 weeks in singleton and twin pregnancies</p> <p><i>Lecture 7:</i> Assessing the normal pregnancy between 10 and 14 weeks in singleton and twin pregnancies</p>	<p>The basic steps of an obstetric ultrasound:</p> <p>Practical demonstration: scan showing key features e.g. mean sac, CRL, caliper placement and image optimisation (From BT Flex 2021 by Divya Singh)</p> <p>Practical demonstration: example of NT showing quality control (From BT Flex 2021 by Gihad Chalouhi)</p>	<p><i>Ultrasound in Obstetrics and Gynecology: A practical approach</i> [Chapter 4]</p>	1 hour and 25 minutes
Friday 4 November			
<p><i>Lecture 8:</i> Cervical assessment*</p> <p><i>Lecture 9:</i> The 6 steps approach</p>	<p>Live demonstration: cervical Assessment</p>	<p><i>Ultrasound in Obstetrics and Gynecology: A</i></p>	1 hour and 10 minutes



	<p>ISUOG “The 6 steps Approach”</p> <p>The ISUOG Basic Training practical curriculum: how to teach and assess the Basic Training trainee</p> <p>Practical Demo: The 6 step approach</p> <p>Practical demonstration: Techniques for cervical assessment and examples (low lying placenta, funneling, cerclage, short, protrusion,.) (From BT Flex 2021 by Suresh Seshadri)</p>	<i>practical approach</i> [Chapter 10]	
Multiple choice test			10 minutes

Saturday 6 November: **LIVE webinar** starting at 12:00 PM GMT:

BT Flex webinar	Week 1: Basic Training's Basics of Scanning	
Date	Saturday 5 November 2022, 12:00 GMT	
Chairs	Suresh Seshadri (India)	
Live Speakers	Basma Darwish (Bahrain) and Gihad Chalouhi (France /Lebanon)	
Time	Agenda	Speaker(s)
12:00	Introduction	Gihad Chalouhi (France)
12:05	Lecture summary: Physical principles of ultrasound	Titia Cohen-Overbeek (Netherlands) (from 2021)
12:15	Lecture summary: Transducers, knobology, etc.	Divya Singh (India) (from 2021)
12:22	Lecture summary: The principles of Doppler	Suresh Seshadri (India) (from 2021)
12:30	Lecture summary: Quality control processes	Suresh Seshadri (India) (from 2021)
12:35	Lecture summary: Informed consent incl. checklist	Titia Cohen-Overbeek (Netherlands) (from 2021)
12:45	Lecture summary: Cervical assessment	Suresh Seshadri (India) (from 2021)
12:50	Lecture summary: Assessing the normal pregnancy from 4-10 weeks	Basma Darwish (Bahrain) (from 2021)
12:55	Lecture summary: Assessing the normal pregnancy from 10-14 weeks	Divya Singh (India) (from 2021)
13:00	Lecture summary: The 6-step approach	Basma Darwish (Bahrain) (from 2021)
13:05	Interactive Q&A	Suresh Seshadri (India), Basma Darwish (Bahrain) and Gihad Chalouhi (France /Lebanon)
13:20	Break	
13:30	Transducers, image production, knobology & scanning planes TA & TV	Basma Darwish (Bahrain)



	<ul style="list-style-type: none"> [• Freeze • Focus • Gain • Depth • Magnification • Locate TI/MI • Probe selection and proper orientation] 	
13:50	Assessing the normal pregnancy between 4 and 10 weeks in singleton and twin pregnancies <ul style="list-style-type: none"> [• Mean sac diameter • CRL] 	Suresh Seshadri (India)
14:10	Assessing the normal pregnancy between 10 and 14 weeks in singleton and twin pregnancies <ul style="list-style-type: none"> [• CRL] 	Basma Darwish (Bahrain)
14:30	The 6 steps approach <ul style="list-style-type: none"> [•Fetal presentation •Amniotic fluid index • Maximum vertical pocket] 	Gihad Chalouhi (france)
15:00	Interactive session	Suresh Seshadri (India), Basma Darwish (Bahrain) and Gihad Chalouhi (France /Lebanon)
15:30	Close of week 1	Gihad Chalouhi (France)

WEEK 2: Monday 7 November – Saturday 12 November 2022

Monday 7 November – Friday 11 November: Study plan:

BT Flex week 2 study components: Monday 7 to Saturday 12 November			
Lectures [ESSENTIAL]	Practical instruction videos [ESSENTIAL]	Further reading [SUGGESTED]	Approximate study time
Monday 7 November			
Lecture 10: Fetal biometry – dating, assessing size and estimating fetal weight Lecture 11: Assessing the placenta and amniotic fluid in singleton and twin pregnancies	Practical demonstration: Taking fetal measurements Practical demonstration: Taking fetal measurements (From BT Flex 2021 by Basma Darwish) Practical demonstration: Placenta and AFI (From BT Flex 2021 by Catalina Valencia)	<i>Ultrasound in Obstetrics and Gynecology: A Practical Approach</i> [Chapters 8-9]	1 hour 35 minutes
Tuesday 8 November			
Lecture 15: The 20 + 2 planes approach to the routine mid trimester scan	Practical demonstration: The full anomaly scan in the 2 nd trimester Practical demonstration: The 20 + 2 planes:		1 hour 40 minutes



<i>Lecture 14:</i> Umbilical and uterine artery Doppler studies	<p>Practical demonstration: The 20 + 2 planes approach to the routine mid trimester scan (From BT Flex 2021 by Catalina Valencia)</p> <p>Practical demonstration:: Umbilical and uterine artery Doppler (From BT Flex 2021 by Nikos Vrachnis)</p>		
Wednesday 9 November			
<i>Lecture 16:</i> Evaluating fetal anatomy from longitudinal sections	<p>The trainees perspective: Evaluating fetal anatomy (From BT Flex 2021 by Catalina Valencia)</p>		1 hour30 minutes
<i>Lecture 12:</i> Distinguishing between normal and abnormal appearances of the fetal anatomy			
Thursday 10 November			
<i>Lecture 17:</i> Distinguishing between normal and abnormal appearances of the skull and brain			30 minutes
Friday 11 November			
<i>Lecture 13:</i> Distinguishing between normal and abnormal fetal size and growth		<i>Ultrasound in Obstetrics and Gynecology: A Practical Approach [Chapters 8-9]</i>	20 minutes
Multiple choice test			10 minutes

Saturday 12 November: **LIVE webinar** starting at 12:00 PM GMT:

BT Flex webinar	Week 2: The Basic Training Approach to Fetal Biometry and Anatomy	
Date	Saturday 12 November 2022, 12:00 GMT	
Chair	Catalina Valencia (Colombia)	
Speakers	Jose Fernando Velez (Colombia) and Basma Darwish (Bahrain)	
Time	Agenda	Speaker(s)
12:00	Introduction	Catalina Valencia (Colombia)
12:05	Lecture summary: Fetal biometry – dating, assessing size and estimating fetal weight	Basma Darwish (Bahrain) (from 2021)
12:10	Lecture summary: Assessing the placenta & amniotic fluid in singleton & twin pregnancies	Catalina Valencia (Colombia) (from 2021)
12:15	Lecture summary: The 20 + 2 planes approach to the routine mid trimester scan	Catalina Valencia (Colombia)
12:20	Lecture summary: Umbilical and uterine artery Doppler studies	Nikolaos Vrachnis (Greece) (from 2021)



12:30	Lecture summary: Evaluating fetal anatomy from longitudinal sections	Basma Darwish (Bahrain)
12:37	Lecture summary: Distinguishing between normal and abnormal appearances of the fetal anatomy	Catalina Valencia (Colombia)
12:44	Lecture summary: Distinguishing between normal and abnormal appearances of the skull and brain	Jose Fernando Velez (Colombia)
12:51	Lecture summary: Distinguishing between normal and abnormal fetal size and growth	Gihad Chalouhi (France) (from 2021)
13:00	Interactive Q&A	Catalina Valencia (Colombia), Jose Fernando Velez (Colombia) and Basma Darwish (Bahrain)
13:20	Break	
13:30	Fetal biometry – dating, assessing size and estimating fetal weight/Assessing the placenta & amniotic fluid in singleton & twin pregnancies [• Biparietal diameter • Head circumference • Abdominal circumference • Femur length]	Basma Darwish (Bahrain)
14:00	The 20 + 2 planes approach to the routine mid trimester	Catalina Valencia (Colombia)
14:30	Distinguishing between normal and abnormal appearances of the skull and brain [• Plane 4: Transventricular plane • Plane 5: Transthalamic plane • Plane 6: Transcerebellar plane]	Jose Fernando Velez (Colombia)
15:00	Interactive Q&A	Catalina Valencia (Colombia), Jose Fernando Velez (Colombia) and Basma Darwish (Bahrain)
15:30	Close of Week 2	Catalina Valencia (Colombia)

WEEK 3: Monday 14 November – Saturday 19 November 2022

Monday 14 November – Friday 18 November: Study plan:

BT Flex week 3 study components: Monday 14 to Saturday 19 November		
Lectures [ESSENTIAL]	Further reading [SUGGESTED]	Approximate study time
Monday 14 November		
Lecture 25: The basics of a gynaecological ultrasound (TA & TV) walkthrough	<i>Ultrasound in Obstetrics and Gynecology: A Practical Approach</i> chapter 14	40 minutes
Tuesday 15 November		



Lecture 26: Examining the uterus: cervix and endometrium	<i>Ultrasound in Obstetrics and Gynecology: A Practical Approach</i> chapter 11	50 minutes
Lecture 27: Examining the uterus: myometrium		
Wednesday 16 November		
Lecture 28: Examining the ovaries and adnexae	<i>Ultrasound in Obstetrics and Gynecology: A Practical Approach</i> chapter 12	20 minutes
Thursday 17 November		
Lecture 29: Typical ultrasound appearances of the most common pathologies in the adnexae		30 minutes
Friday 18 November		
Lecture 30: Writing the gynecological ultrasound report	<i>Ultrasound in Obstetrics and Gynecology: A Practical Approach</i> chapter 15	30 minutes
Multiple choice test		10 minutes

Saturday 19 November: **LIVE webinar** starting at 12:00 PM GMT:

BT Flex webinar	Week 3: The Basic Training Approach to Imaging the Pelvis	
Date	Saturday 19 November 2022, 12:00 GMT	
Chair	Shabnam Bobdiwala (UK) / Chiara Landolfo (Italy)	
Speakers	Nikolaos Vrachnis (Greece)	
Time	Agenda	Speaker(s)
12:00	Introduction	Shabnam Bobdiwala (UK)
12:05	The basics of a gynecological scan	Shabnam Bobdiwala (UK)
12:15	Examining the uterus: cervix and endometrium: Lecture summary	Chiara Landolfo (Italy)
12:30	Examining the uterus: myometrium: Lecture summary	Nikolaos Vrachnis (Greece)
12:40	Examining the normal ovaries and adnexae: Lecture summary Examining pathology in the ovaries and adnexae: Lecture summary	Mala Sibal (India)
13:05	Writing the gynecological ultrasound report: Lecture summary	Shabnam Bobdiwala (UK)
13:15	Live Q&A	Shabnam Bobdiwala (UK), Chiara Landolfo (Italy) and Nikolaos Vrachnis (Greece)
13:35	Break	
13:45	Basics of a gynae scan, OPUS live scan	Shabnam Bobdiwala (UK)
14:20	Examining the ovaries and adnexae: [• Left ovary (normal): Longitudinal pane-Measure ovary (2 planes) • Left ovary (normal): Transverse pane- Measure ovary (1 plane)	Chiara Landolfo (Italy)



	<ul style="list-style-type: none"> • Right ovary (normal): Longitudinal pane-Measure ovary (2 planes) • Right ovary (normal): Transverse pane-Measure ovary (1 plane)] 	
14:40	Early Pregnancy: Intrauterine pregnancy, extrauterine pregnancy and any early pregnancy scan	Nikos Vrachnis (Greece)
15:00	Interactive Q&A	Shabnam Bobdiwala (UK), Chiara Landolfo (Italy) and Nikolaos Vrachnis (Greece)
15:30	Close of Week 3	Chiara Landolfo (Italy)

WEEK 4: Monday 21 November – Saturday 26 November 2022

Monday 21 November – Friday 25 November: Study plan:

BT Flex week 4 study components: Monday 21 to Saturday 26 November			
Lectures [ESSENTIAL]	Practical instruction videos [ESSENTIAL]	Further reading [SUGGESTED]	Approximate study time
Monday 21 November			
<i>Lecture 18:</i> Examining the upper lip, face and profile correctly	Plan your ultrasound movement, a lecture by Dr Mirghani:		1 hour and 10 min
<i>Lecture 19:</i> Assessing the neck and chest	Assessing the neck and chest: practical demonstration (From BT Flex 2021 by Nikolaos Vrachnis)		
Tuesday 22 November			
<i>Lecture 20:</i> Obtaining and interpreting heart views	Live scan with OPUS: Obtaining and interpreting heart views: https://vimeo.com/576462891 Obtaining and interpreting heart views: Practical demonstration (From BT Flex 2021 by Catalina Valencia)		50 minutes
Wednesday 23 November			
<i>Lecture 21:</i> Examining the abdomen and anterior abdominal walls			1 hour
<i>Lecture 22:</i> Distinguishing between normal and abnormal appearances of the urinary tract			



Thursday 24 November			
Lecture 23: Distinguishing between normal and abnormal appearances of the long bones and extremities			30 minutes
Friday 25 November			
Lecture 24: Making a decision, normal or not			30 minutes
Multiple choice test			10 minutes

Saturday 26 November: **LIVE webinar** starting at 12:00 PM GMT:

Time	Agenda	Speaker(s)
12:00	Introduction	Gihad Chalouhi (France)
12:05	Examining the upper lip, face and profile correctly: Lecture summary and practical demonstration	Aly Youssef (Italy)
12:15	Assessing the neck and chest: Lecture summary	Basma Darwish (Bahrain)
12:20	Obtaining and interpreting heart views: Lecture summary	Catalina Valencia (Colombia)
12:30	Distinguishing between normal & abnormal appearances of the long bones & extremities: Lecture summary and practical demonstration	Nikolaos Vrachnis (Greece)
12:35	Distinguishing between normal and abnormal appearances of the urinary tract: Lecture summary and practical demonstration	Basma Darwish (Bahrain)
12:45	Making a decision, normal or not	Gihad Chalouhi (France/Lebanon)
12:50	Interactive Q&A	Nikolaos Vrachnis (Greece), Basma Darwish (Bahrain), Catalina Valencia (Colombia) and Gihad Chalouhi (France/Lebanon)
13:20	Break	
13:30	Distinguishing between normal and abnormal appearances of the fetal anatomy: practical demonstration [• Transventricular plane • Transthalamic plane • Transcerebellar plane • Four chamber view • Abdominal circumference • Kidneys • Cord insertion	Nikolaos Vrachnis (Greece)



	<ul style="list-style-type: none"> • Bladder • Long spine • Axial spine] 	
13:50	Obtaining and interpreting heart views: practical demonstration [• Plane 7: 4-Chamber and lungs]	Catalina Valencia (Colombia)
14:10	Examining the abdomen and anterior abdominal walls: Lecture summary and practical demonstration [• Plane 11: Abdominal circumference • Plane 12: Cord insertion]	Gihad Chalouhi (France/Lebanon)
14:40	Distinguishing between normal and abnormal appearances of the urinary tract [• Plane 13: Transverse section kidneys & pelvis • Plane 14: Transverse section pelvis and bladder with umbilical arteries]	Basma Darwish (Bahrain)
15:00	Interactive Q&A	Nikolaos Vrachnis (Greece), Basma Darwish (Bahrain), Catalina Valencia (Colombia) and Gihad Chalouhi (France/Lebanon)
15:30	Close of week 4. End of BT Flex.	Gihad Chalouhi (France/Lebanon)