Pharmaceutical Medical Gas Testing – Five day course
Monday 3 – Friday 7 February 2020

Monday 3 February 2020
09:00  Registration and coffee
09:30  Course and module introduction
       Objectives, work of the medical gas sub-group and medical gas policy
       Theresa Hughes, Course Director and QC (MGPS) and QA Specialist (NHS) Reading
10:20  Introduction to medical gases and their uses
       Tim Sizer, Regional QA Specialist NHS South West
12:00  Introduction to HTM 02-01 (2006)
       Key principles and its application in practice
       Richard Maycock, Medical Engineering Systems Limited
12:30  Lunch
13:00  Key MGPS features
       Oxygen VIE and PCC
       Medical and surgical air plant
       Vacuum and AGSS plant, Manifolds
       Richard Maycock, Medical Engineering Systems Limited
13:45  Key MGPS features continued
       Valves, LVAs and AVSUs
       Central and local alarms
       Pendants and beams, terminal units and NISTs
       Richard Maycock, Medical Engineering Systems Limited
14:30  Refreshment break
14:45  On-site practical sessions
       3 parallel groups in rotation (30 minute sessions)
       Explanation of how they work and issues relating to them:
       VIE - Richard Maycock
       Medical air compressor - Adrian Fairbrother, QC (MGPS)
       Manifold - Ed Doyle QC (MGPS) Altec (Analytical and Technical) Services Ltd
16:15  Manufacture of medical gases and the role of the QP
       Speaker to be confirmed
17:00  End of day one
19:00  Informal meet and greet drinks in Copthorne hotel bar (optional)

Tuesday 4 February 2020
08:50  Gas safety in relation to MGPS
       Theresa Hughes
09:50  Aspects of MGPS engineering (part 1):
       Configuration of central sources of supply, emergency reserve supplies and mobile
       emergency backfeed manifolds provision
       Richard Maycock
10:35  Refreshment break
10:50  Aspects of MGPS engineering (part 2):
       Installation requirements of the distribution pipeline, monitoring systems and terminal unit
       provision
       Richard Maycock
11:50  On-site practical sessions
       2 parallel groups in rotation (30 minute sessions)
       Demonstration of AP tests – Richard Maycock
       Demonstration of pipe jointing – Midland Medical staff
12:50  Lunch
Tuesday 4 February 2020 continued

13:20 Tests that the AP carries out or witnesses. Examples of where tests or observations/PPM have identified problems
Paul Jones, QC (MGPS) and Consultant (Medical Gases)

14:20 Introduction to the role of QC MGPS
In relation to HTM 0201
Theresa Hughes

15:20 Workshop sessions 3 parallel groups in rotation (40 minute sessions)
Refreshment break to be taken during workshops
Terminal units function, identity and operational problems
Andrew Sully, QC (MGPS) Cardiff and Vale NHS Trust
AVSUs, LVA’s and alarms operation and faults
Richard Skidmore, Head of Quality, Barts Health NHS Trust
Cylinder Management identification, storage, tracking, and connections
Paul Jones, QC (MGPS) and Consultant (Medical Gases)

17:30 End of day two

19:00 Course dinner – Copthorne hotel

Wednesday 5 February 2020

08:50 Moisture in medical gas systems
Keith Butler, Alpha Moisture Systems

09:50 Introduction to ‘permit to work’ system and B forms
Richard Maycock

10:35 Workshop ‘permit to work’ system
Role-play workshop
Richard Maycock
Refreshment break to be taken during workshops

11:45 Introduction to pharmaceutical testing of gases
How medical gases are tested and how instrumentation does its job
Adrian Fairbrother

12:20 Lunch

12:50 Workshop sessions 4 parallel groups in rotation (40 minute sessions)
Refreshment break to be taken during workshops
Oxygen, identity and purity methods
Andrew Sully, QC (MGPS) Cardiff and Vale NHS Trust
Nitrous oxide / Entonox, identity and purity methods
Richard Skidmore, Head of Quality, Barts Health NHS Trust
Medical, surgical and dental air, identity and purity methods including moisture, particulates and oil
Richard Sutherland, QC (MGPS) Omicron Ltd
Surgical CO2 and Heliox – uses and ID specialist gases
Paul Jones, QC (MGPS) and Consultant (Medical Gases)

17:00 End of day three

Thursday 6 February 2020

08:50 The Basic Tool Kit
Theresa Hughes

09:10 Instrument calibration
Adrian Fairbrother, QC (MGPS)

09:35 Calibration gases
Adrian Fairbrother

10:00 Refreshment break

10:15 Calibration of Instruments – demonstration/workshop
Adrian Fairbrother and Theresa Hughes
Thursday 6 February 2020 continued..

11:00 Common problems that occur with equipment
Richard Sutherland, QC (MGPS) Omicron Ltd

11:45 Measurements of particulates
Paul Jones, QC (MGPS) and Consultant (Medical Gases)

12:30 Lunch

13:00 Problem solving workshop (5 stations)
Workbook
45 minute for test and report writing

Refreshment break to be taken during workshops

Testing manifold, Richard Sutherland

Testing a compressor – oil, moisture and CO/CO₂/SO₂, Adrian Fairbrother

Pendant testing, Paul Jones

Mock-up bedhead tests – TU practice, ID and use of Servomex, Theresa Hughes

Terminal unit identity, Tim Sizer

17:00 End of day four

Friday 7 February 2020

08:45 Introduction to day five and welcome (Copthorne Hotel)
Theresa Hughes
QC (MGPS) and QA Specialist (NHS) Reading

09:00 Oxygen conservation
Steve Connew, previously Colchester Hospital University NHS

09:45 Novice QC (MGPS) – pressures of the job
Alistair Ellis-Jones, QC (MGPS) North East Wales NHS Trust

10:30 Refreshment break

10:45 MGPS line pressure
Why is it useful for the QC to know, examples of problems identified, include problems found with vacuum line pressure ID
Richard Sutherland, QC (MGPS) Omicron Ltd

11:45 Introduction to assessment
Tim Sizer and Theresa Hughes

12:00 Written assessment

13:00 Lunch

13:45 Question and answer session
Theresa Hughes, Tim Sizer and team

14:30 Round-up, feedback on assessment test and what happens next
Includes work based practice preparing for registration
Theresa Hughes

15:00 Closing summary, end of day five and course

Please note that, although the organisers remain devoted to the programme specified, they reserve the right to vary the programme in detail if required to do so by factors beyond their control.