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**Announcement**

**A Joint FAO-TAMU On-line Course on Laboratory Quality Systems**

**(September 7 – November 13, 2020)**

The Food and Agriculture Organization (FAO) invites applications for participation in an online course - ‘*Laboratory* *Quality Systems*’, offered by Texas A&M University (TAMU).

**Deadline for submission of the application** August 10, 2020

**Minimum education requirement**Masters in Animal Science/Biochemistry/Chemistry/Feed Science

**Other essential requirements**Candidate must be employed and responsible for the laboratory operation and analyses.

**Technology requirements**

* A computer that is less than 4 years old;
* Reliable high-speed Internet connection (cable/DSL or better) with an updated browser;
* Software such as Microsoft Word, PowerPoint & Excel 2003-2013 or equivalent;
* Common plug-ins (e.g., Adobe Reader, Flash Player, virus protection, etc.); and
* Microphone and speakers.

**Costs**The fee for the course (US $500) covers the cost of instruction and materials. Under a special arrangement, candidates from developing countries selected to participate will be sponsored jointly by FAO and Texas A&M University andno participation fee will be charged from the candidate or the organization to which s/he belongs.

**Application submission procedure**

Submit application by email to [Feed-Quality-Control@fao.org](mailto:Feed-Quality-Control@fao.org) with the following content:

1. Write and submit a one-page motivation letter explaining why you wish to take this course and how you will apply the knowledge gained. Include in your letter:

* First name
* Last name
* Phone number
* Email address

1. Include a scanned copy of a time and resource commitment from your Director/Head of your organization with his/her signature.

**Applicant notification**

Successful candidates will be informed of their selection by August 20, 2020. Selection will be based on the requirements listed above, the motivation letter from the candidate, and the letter from the Director/Head of the institution in which the candidate is employed. Spaces in the course are limited.

**COURSE DESCRIPTION**

**Overview**

The course will be in **English** and its schedule is included below. The course will address, among others, the following main topics:

* Ensuring Validity and Reliability
* Laboratory Procedures
* Quality Assurance: Procedures, Tools & Methods
* Laboratory Management

The course will also cover quality systems and method development, ISO 17025:2017 standard and accreditation, ensuring the integrity of procedures used in laboratory processes, chain of custody, information management, international laboratory standards, regulatory requirements for laboratory operation and bio-security precautions

**Time Commitment**About8 – 10 hours per week

**Course Tools**

All course materials and activities will be presented using Texas A&M University’s learning management system. Details will be provided to participants before the start of the course.

**Course content**

Weekly materials are presented using a variety of formats, including online narrated power point slide presentations and videos. Weekly course assignments, conducted as a discussion or homework assignment, will assist in the participant’s understanding of concepts. These include, but are not limited to, statistical process controls, developing standard operating procedures (SOPs), corrective/preventive actions, and methods of validation.

**Class Readings**

Most readings will be available in the learning management system in .pdf format. Other readings will be available online, with a hyperlink provided in the learning management system.

**Grading**

Grades will be determined as follows:

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| --- | --- |
| Discussions (3) | 30 pts |
| Homework (6) | 70 pts |

**Grading Policy and Certificate**

Due to the participatory nature of this web‐based class, regular log‐in to the learning management system is expected. Completion of the course assignments and a score >70% is required to receive a certificate. Participants will receive a certificate upon successful completion of the course

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| **Instructor information**  Dr. Tim Herrman  Professor, Department of Soil and Crop Science, Texas A&M University, USA  State Chemist and Director, Office of the Texas State Chemist, USA  [tjh@otsc.tamu.edu](mailto:tjh@otsc.tamu.edu) | **Course Coordinator**  Prabha Vasudevan  Education/Outreach Coordinator  Office of the Texas State Chemist, USA  [prabha@otsc.tamu.edu](mailto:prabha@otsc.tamu.edu) |

**Course Schedule**

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| --- | --- | --- |
| ***Week (Dates)*** | ***Topics*** | ***Assignments/Due Dates*** |
| ***Unit I – Laboratory Quality System Structure*** | | |
| ***1*** *Sept 7 – 13, 2020* | *Laboratory Quality Systems-Overview; Laboratory Standards* | *Self-Introduction;*  *Discussion #1 – Due Sept 14, 2020* |
| ***2*** *Sept 14 - 20, 2020* | *ISO 17025 Requirements; Laboratory Accreditation* | *Homework #1 – Due Sept 21, 2020* |
| ***Unit II – Laboratory Quality Control Techniques*** | | |
| ***3***  *Sept 21 - 27, 2020* | *Quality Control Techniques*  *The Big Three*   * *Traceability* * *Proficiency Testing* * *Uncertainty* | *Discussion # 2 – Due Sept 28, 2020*  *Homework #2 – Due Sept 28, 2020* |
| ***4***  *Sept 28 – Oct 4, 2020* | *Quality Control Procedures*   * *Chain of Custody* * *Control of Non-conforming work*   *Recording and Reporting for Quality Assurance* | *Homework #3 – Due Oct 5, 2020* |
| ***5***  *Oct 5 - 11, 2020* | *Statistical Process Control* | *Homework #4 – Due Oct 12, 2020*  *Discussion # 3 – Due Oct 12, 2020* |
| ***Unit III – Method Validation*** | | |
| ***6*** *Oct 12 – 18, 2020* | *Validation of Analytical Procedures* | *Discussion #4 – Due Oct 19, 2020* |
| ***7***  *Oct 19 – 25, 2020* | *Validation of Microbiological Procedures & Chemical Procedures, Spectroscopic Procedures and Rapid Methods* | *Homework #5 –Due Oct 26, 2020* |
| ***8*** *Oct 26 - Nov 1, 2020* | *Validation of Spectroscopic Procedures and Rapid Methods* | *Discussion #5 – Due Nov 2, 2020* |
| ***Unit IV – Laboratory Quality Management*** | | |
| ***9***  *Nov 2 – Nov 8, 2020* | *Concept of Quality Management; Technology Strategy; Budgeting; Benchmarking* | *Homework #6 – Due Nov 9, 2020* |
| ***10***  *Nov 9 – 13 2020* | *Laboratory Networks ; Laboratory Safety; Risk Assessment* | *Discussion #6 – Due Nov 13, 2020* |