

## Announcement

### **A Joint FAO-TAMU On-line Course on Laboratory Quality Control Systems (June 2 to August 11, 2015)**

FAO invites applications for participation in an on-line course on 'Laboratory Quality Systems' organized with Texas A&M University (TAMU).

**Deadline for submission of the application:** 15 April 2015.

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

**Other essential requirements:** The candidate must be employed and responsible for the laboratory operation and analyses.

**Technology requirements:** The candidate must have access to:

- A computer that is less than 4 years old;
- Reliable high-speed Internet connection (cable/DSL or better) & Mozilla Firefox browser;
- Office software such as Microsoft Word, Excel, PowerPoint & Excel or equivalent;
- Common plug-ins (e.g., Adobe Reader, Flash Player, virus protection, etc.); and a microphone and speakers; and - CD/DVD player/burner.

**Cost:** The participation fee for the course (US\$750) covers the cost of instruction, mailing, and materials. **Under a special arrangement, candidates selected to participate will be sponsored by FAO and Texas A&M University, and no participation fee will be charged from the candidate or the organization to which s/he belongs.** *However, in the event of dropping out of the candidate from the course, the candidate or the organization to which the candidate belongs will have to pay an amount of US\$ 500.*

**Procedure for submission of the application:** Please submit a one-page motivation letter giving reasons for undertaking this course and how the knowledge gained will be used. Include the following information in your letter:

- First name
- Last name
- Physical mailing address for FedEx deliveries
- Phone number
- Email address

The motivation letter should be accompanied by a scanned copy of a time and resource commitment letter from your Director/Head of the organization. If your laboratory has participated in Proficiency (Ring) tests coordinated by FAO, please mention that in your motivation letter.

The course will be administered by Dr. Tim Herrman, Professor, State Chemist and Director Office of the Texas, TAMU, USA.

The places for the course are limited. The application can be submitted electronically, at your earliest convenience, but not later than 15 April 2015 to: [Harinder.makkar@fao.org](mailto:Harinder.makkar@fao.org)

The successful candidates will be informed of their selection by 15 May 2015. The 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.

## **COURSE DESCRIPTION**

Quality systems and method development used within a laboratory; ensuring the integrity of procedures used in lab processes, chain of custody, information management, and international laboratory standards; regulatory requirements for laboratory operation; bio-security precautions; and laboratory management. Course schedule is given below.

**Time candidates need to devote:** About 8 hours per week

### **Course Goals**

After completing this course, candidates will possess a practical knowledge of the standard laboratory practices and quality systems required to oversee a scientific laboratory's quality management program. This course is intended to equip the candidate with the breadth of knowledge needed to obtain laboratory data and results that are reliable, interpretable, repeatable, and defensible. Candidates will possess the capability to participate on a laboratory management team including budgeting and forming a technology strategy.

### **Key Topics**

This course will address the following topics:

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

### **Course Tools**

All course materials and activities will be presented using the eCampus Learning Management System. You access eCampus by logging into <http://ecampus.tamu.edu>

### **Class Readings**

Most readings will be available in Blackboard in .pdf format. Other readings will be available online, with a hyperlink provided in Blackboard.

### **Course Presentations**

Weekly materials will be presented using a variety of formats, including online slide presentations, audio, and videos.

### **Exams and Certificate**

A midterm and final exam will be administered through the course management system. On successful completion of the course a certificate will be sent to the candidate.

### **Homework/Discussions**

Course discussions and homework will be used to assess your understanding of concepts throughout the course and address the following topics:

- Statistical Process Control
- Developing a Standard Operating Procedure (SOP)
- Corrective/Preventative Actions
- Method Validation

### **Grading**

Your grades will be determined as follows:

|             |                    |
|-------------|--------------------|
| Discussions | 10% of total grade |
| Exams       | 30% of total grade |
| Homework    | 60% of total grade |

**A certificate will be issued on successful completion of the course**

### **Grading Policy**

Class assignments, quizzes, and exams must be completed on the dates set by the instructor on the course website unless prior approval has been granted by the instructor.

### **Attendance, Homework and Make-up Exam Policy**

Due to the participatory nature of this Web-based class, regular log-in to the course Web site is expected.



Food and Agriculture Organization  
of the United Nations



TEXAS A&M  
UNIVERSITY

## FAO- TAMU LABORATORY QUALITY SYSTEMS

JUNE 2 – AUGUST 13, 2015

ONLINE PROFESSIONAL EDUCATION

### Course Schedule

| Week  | Topic   | Assignments   |
|---|---|---|
| <b>Unit I - Introduction to Quality Systems</b>     |   |   |
| <b>1</b><br>June 2 – 7                              | Laboratory Quality Systems-Overview<br><br>Using Statistical Procedures to Analyze Laboratory Data                              | Self-Introduction<br><br>Discussion topic (Due June 8, 2015)                      |
| <b>2</b><br>June 8 – 14                             | Using Statistical Procedures to Analyze Laboratory Data, cont.  | Homework 1 (Statistics – Due June 15, 2015)                                       |
| <b>Unit II Validation of Analytical Procedures</b>  |   |   |
| <b>3</b><br>June 15– 21                             | Validation of Analytical Procedures: Microbiology   | Homework 2 (AOAC – Due June 22, 2015 )  |
| <b>4</b><br>June 22 – 28                            | Validation of Analytical Procedures: Rapid Methods  | Homework 3 (MPAES– Due June 29, 2015)<br><br>Discussion topic (Due June 29, 2015) |
| <b>5</b><br>June 29– July 5                         | Validation of Analytical Procedures: Instrumental   | Midterm (Due July 6, 2015)  |
| <b>Unit III – ISO Procedures and Implementation</b> |   |   |
| <b>6</b><br>July 6 – 12                             | ISO 17025 Framework and Accreditation <ul style="list-style-type: none"> <li>• Documents and Records</li> <li>• SOPs</li> </ul> | Homework 4 (Standard Operating Procedure – Due July 13, 2015)                     |

|  |   |   |
|--|---|---|
| <b>7</b><br>July 13 –19                | The Big Three <ul style="list-style-type: none"> <li>• Traceability</li> <li>• Proficiency Testing</li> <li>• Uncertainty</li> </ul>  | Discussion topic (Due July 20, 2015)  |
| <b>8</b><br>July 20 – 26               | Quality Control Procedures <ul style="list-style-type: none"> <li>• Corrective actions</li> <li>• Control of Non-conforming work</li> <li>• Instrument Calibration and Maintenance</li> <li>• Training</li> </ul> | Homework 5 (Corrective/ Preventative actions for non-conforming work – Due July 27, 2015) |
| <b>Unit IV – Laboratory Management</b> |   |   |
| <b>9</b><br>July 27 – Aug. 2           | Laboratory Management Principles<br><br>Research Compliance<br><br>Technology Strategy  | Homework 6 (Capital Budgeting – Due August 3, 2015)                                       |
| <b>10</b><br>August 3 - 12             | Reporting Results Sampling & Handling Evidence<br><br>Laboratory Information Management   | Final Exam (Due August 12, 2015)<br><br>Discussion topic (Due August 10, 2015)            |