**AHS One Day Food Safety Certification Course**

**Program Plan**

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# Summary of program

The AHS one day food safety certification course will be availabletofood handlers in Alberta who require food sanitation and hygiene certification and will be taught by Public Health Inspectors (known as Health Educators) who hold the responsibility of facilitating the current 14 hr course.

The course will consist of two hours of individual online study or home study (printed booklet with review questions) to be completed before the scheduled six hour in-class course and subsequent provincial examination in food sanitation and hygiene. The course will provide participants with a solid knowledge base to successfully pass the provincial exam and then utilize the information to identify and solve food safety issues when they return to their respective work environments.

Focus and justification of planning

Approach

The blended 8 hr food safety course has already been justified through the collection and analysis of current 14hr course evaluations; informal feedback from participants; sharp decline in course registrants since the change in regulation related to the required class time (change from 14 hrs to 8 hours) and the acceptance of online courses; and pressure from management to create this new course.

Due to the fact that the course has already been justified by the department, a needs assessment was not required. To come to the consensus of incorporating a pre-study (online format, with the alternative of a printed booklet), problem analysis as well as trend analysis was carried out. This analysis was done at a meeting of the department’s Quality team members and designated Health Educators from across the province. The problem – requirement to create a one-day course – was discussed and the concept of utilising the pre-existing basic food safety training home study booklet was introduced and all members at the table agreed that this would be an acceptable means to reduce class time and ensure students come to the class prepared; with all students having acquired some basic knowledge prior to the course. The delivery format of course competitors was also discussed and it became evident, that one of the trends was to incorporate a pre-study into shorter face to face classroom sessions. There was also the discussion of the fact that some educators had heard poor reviews from courses that were only one day in length, without a pre-study, and therefore there was a greater comfort level in including a pre-study to ensure more time for basic food safety information processing and reflection.

Consideration of learning community and organizational context

A review of course evaluations as well as reports from Health Educators throughout the province confirmed the learner community’s need of a one-day course, that still meets the learning objectives set out by Alberta Health, but fits more easily the schedule of food facility staff, and reduces the cost burden on food facility owners. Although the course cost won’t be reduced, employers will only have to pay staff for one day of work versus two days of work.

When focusing the program, the reality that food handlers in Alberta range in age from 16-65+ and are from a wide variety of socioeconomic and ethnic backgrounds, and have varying English literacy skills, played an integral role in how the program will be developed. For example, it was determined that the course will be developed at an approximate Grade 8 level as this is the lowest grade level that can ensure that learning objectives are achieved but will be understandable by the vast majority of students in English. The course will also be available in Cantonese and Vietnamese in some areas of the province when possible. The learning community was considered in the design of the course, which includes a pre-study which will be available online but also in printed copy. This will allow students the flexibility to meet their own learning needs prior to the in class session; students that are very familiar with food safety may decide to forgo the pre-study while other students will have the opportunity to become very familiar with the information on their own time. Having the pre-study available both online and as a printed copy will allow students to choose the most convenient method for them. There is also the opportunity for students to obtain the home study in 5 different languages.

The range of socioeconomic and ethnical backgrounds held by the learning community plays a factor in focusing case studies, discussions and pictures included in multi-media materials. The potential for unknown power dynamics, because of the vast range of backgrounds of the students, impacting learning is another important consideration when focusing the program and deciding on approaches to learning activities.

The one day approach also meets the organizational context as it helps alleviate financial barriers by reducing the time spent by Health Educators teaching the courses, allowing time to offer more courses, if needed, and more time to carryout additional duties. The regulatory barrier of meeting Alberta Health Food Safety Education Course Guidelines, anchors the course learning objectives and overall program goal.

Determination of present and desired capabilities

Present capabilities of students has already been assessed through insight provided by Health Educators, who have many years experience teaching the food safety course throughout the province, have proctored exams, reviewed evaluations and have routinely completed ice-breaker activities that provide an indication of the prior knowledge of students when starting the course. In addition, the Health Educators have experience with inspecting food facilities and talking with food operators and staff about food safety and observing their practices. Generally speaking, there is a complete range of food safety knowledge, skills and attitudes among participants, from very minimal (no previous kitchen experience or education on food safety) to advanced (long history of kitchen experience and previous education on food safety). Attitudes vary as well, from no attitude, very negative attitudes to very positive attitudes.

Desired capabilities will be formulated through the value judgement of the planning team members involving both educators and management for capabilities that don’t fall under the pre-ascribed learning objectives provided by Alberta Health. For those falling under Alberta Health, a round table discussion and opportunity to comment on the desired capabilities from all planning team members will occur. It is likely that assessing the desired capabilities may impact and potentially enhance some existing learning objectives. The needs statements were disseminated to interested stakeholders for review and comment, prior to clarifying program and learning objectives.

# Clarification of program and learning objectives

Program outcomes

The program outcomes are:

1. Students will gain the knowledge required to successfully pass the Provincial Examination in Food Sanitation and Hygiene.
2. Students will gain a repertoire of food safety knowledge that can be used in practice to reduce the risk of foodborne illness when preparing food.
3. Students will gain familiarity with the food protection agencies and regulations that impact their business.
4. Students will gain an understanding of what foodborne illness is, how it happens, the symptoms and how to deal with foodborne illness complaints or suspected illness in their facility.
5. Students will learn practical skills that can be used in the safe production of food in their facility.

In addition to the program outcomes there were two main program objectives focused on program operations:

1. To maintain the high standard of course design and facilitation that the department is known to offer while ensuring that the classroom portion of the course doesn’t exceed the allotted six hours.
2. To recapture a portion of the marketplace lost to competitors in order to regain participant numbers to the level achieved in 2009 by June 2014.

Learning objectives

Learning objectives were prioritized by first consulting the learning objectives described in the Alberta Food Safety Education Guidelines as all of these objectives must be achieved in order to have the course approved by Alberta Health – these are all ascribed needs (Sork T. , 2001). Additional needs were developed by the course planning team (both ascribed needs as well as utilizing feedback from participants to include felt needs) by providing each team member with a list of the ascribed needs from Alberta Health and a table to fill out any needs they feel should be included, including a section to fill out present capabilities and desired capabilities. These needs were compiled into a table and then prioritized, by each team member, using a priority rating chart with high, medium and low ranking for criteria described in Caffarella (2002) including:

* influence;
* magnitude of discrepancy;
* contribution to individuals’ knowledge, skills and performance;
* potential results; and
* risk assessment.

Due to the time constraints of the course, the results from the rankings were compiled and the top five ranked priorities were formally included in the course learning objectives and instructional plans. This method allowed the value judgements of all team members to be included on a level playing field and reduced the role of power dynamics within the planning team.

Table 1 provides a list of the pre-determined learning objectives from Alberta Health. The team reviewed the learning objectives and then considered the appropriate present capabilities and desired capabilities. If the desired capabilities couldn’t be achieved fully through the learning objective, it was reworded. After reviewing and reflecting on Alberta Health’s learning objectives, the task of prioritizing the team’s additional needs was carried out. Table 2 presents the five top additional learning objectives identified by the planning team.

Table 1: Pre-determined learning objectives from Alberta Health with paired needs statements and type of learning

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Paired Needs Statements** | **Corresponding Objective(s)** | **Type of Learning (domain)** |
| 1 |  (PC) Students aren’t confident in connecting the importance of hygiene to preventing foodborne illness. | Describe why personal hygiene of a food service employee is important to the prevention of food borne illness. | Acquisition of knowledge |
|  (DC) Students can connect the importance of hygiene to preventing foodborne illness. |
| 2 | (PC) Students don’t know what the response from management should be when staff have a condition, such as they are sick or have a skin infection, that could impact food safety. | Describe the appropriate steps to be taken, by the person in charge, in dealing with an employee who has a condition that may cause food borne illness in others. | Acquisition of knowledge |
| (DC) Students can articulate the steps that management should take when a staff member has a condition that can impact food safety. |
| 3 | (PC) Students can list at most one to two common foodborne illnesses, one common source and describe the common symptoms of foodborne illness. | List the most common diseases that are transmittable through food, ***the common sources*** and describe the symptoms associated with these diseases. | Acquisition of knowledgeNote – added: “the common sources” |
| (DC) Students can list at least three foodborne illnesses, their common sources and describe the specific symptoms for that illness. |
| 4 | (PC) Students have a general understanding that food should not be left out a room temperature but can’t articulate the significance of time and temperature in the relations to microbial growth. | Explain the significance of time and temperature relationships in the growth of microorganisms associated with foodborne illness. | Acquisition of knowledge |
| (DC) Students have a thorough understanding of the significance of time and temperature relationships in the growth of microorganisms.  |
| 6 | (PC) Students aren’t able to explain why it is hazardous to eat raw and under cooked high-risk foods. | Identify the hazards involved in the consumption of raw or under cooked high-risk foods including (but not limited to) meat, poultry, eggs, fish, fruits and vegetables. | Acquisition of knowledge |
| (DC) Students understand and can explain why it is hazardous to eat raw and under cooked high-risk foods. |
| 7 | (PC) Students can only vaguely articulate why safe food handling practices are important in preventing foodborne illness. | Describe why proper food handling practices are important for the prevention of food borne illness. | Acquisition of knowledge |
| (DC) Students can confidently articulate why safe food handling practices are important in preventing foodborne illness. |
| 8 | (PC) Students don’t know the required temperatures for safely storing and preparing food. | List the required temperatures for the safe freezing, thawing, refrigeration, cooking, cooling, hot holding, cold holding and reheating of potentially hazardous food. | Acquisition of knowledge |
| (DC) Students can articulate all the required temperatures for safely storing and preparing food. |
| 9 | (PC) Students make no connection between providing proper equipment and facilities and preventing foodborne illness. | Explain the importance of providing proper equipment and facilities for the prevention of food borne illness. | Acquisition of knowledge |
| (DC) Students are aware and can articulate the connection between providing proper equipment and facilities and preventing foodborne illness. |
| 10 | (PC) Students understand the concept of cleaning but are uncertain of what sanitizing is and how to properly clean and sanitize utensils and food-contact surfaces. | Describe the correct procedures for cleaning and sanitizing utensils and food-contact surfaces ***and define the meaning of the two terms: cleaning and sanitizing*** | Acquisition of knowledgeNote – added: “define the meaning of the two terms : cleaning and sanitizing” |
| (DC) Students understand the concepts of cleaning and sanitizing and can explain the correct procedure for cleaning and sanitizing utensils and food-contact surfaces.  |
| 11 | (PC) A limited number of students understand what the term potable water means and the majority of students don’t know what to do if it is suspected that the water in their facility is contaminated.  | List the acceptable sources of potable water for a food establishment and measures taken to assure that water remains protected from contamination – ***Adapted to: describe what potable water is and measures to take if water might be contaminated.*** | Acquisition of knowledgeNote – this learning outcome was changed to better fit the question bank of the exam, existing (approved) course material and to provide practical advice dealing with contaminated water.  |
| (DC) Students can articulate what the term potable water is and the steps to take if it is suspected that the water in their facility is contaminated. |
| 12 | (PC) Students have some understanding of how to store, dispense and dispose of chemicals used in a food facility. | List the procedures to safely store, dispense and dispose of poisonous and/or toxic materials – ***Adapted to: Describe how to safely store, dispense and dispose of chemicals used in a food facility.*** | Acquisition of knowledgeNote – this learning outcome was changed to better fit the questions bank of the exam, existing (approved) course material and to provide practice information on the chemicals that are used in food facilities |
| (DC) Students have a thorough understanding of how to store, dispense and dispose of chemicals used in a food facility. |
| 13 | (PC) Students are unfamiliar with both the terminology of HACCP (Hazard Analysis Critical Control Point) and the concept of applying this to enhance food safety. | Identify the critical control points of a food operation that may contribute to food borne illness and the proper steps taken to assure that those points are controlled ***– Adapted to: Identify hazards, critical control points and the associated control steps to safely preparing food.*** | Enhancement of cognitive skills and problem-finding and -solving capabilitiesNote – this learning outcome was missing the identification of hazards in food |
| (DC) Students have a basic understanding of HACCP and can apply the practical aspects of HACCP in the preparation of food. |
| 14 | (PC) Students have uninformed and incorrect information of how to deal with foodborne illness complaints. | Describe the correct procedures for dealing with a foodborne illness complaint. | Acquisition of knowledge |
| (DC) Students are confident in explaining the procedure for dealing with foodborne illness complaints. |
| 15 | (PC) Students are unfamiliar with the Alberta Food Regulation and its relevance for food safety in commercial food facilities. | Identify relevance of the Alberta Food Regulation. | Acquisition of knowledge |
| (DC) Students are familiar with the Alberta Food Regulation and understand its relevance for food safety in commercial food facilities. |
| 16 | (PC) Students are unfamiliar with the different government agencies that play a role in food safety both in Alberta and in Canada. | Identify the government agencies relevant to food service operations and explain their roles. | Acquisition of knowledge |
| (DC) Student are familiar with the different government agencies that play a role in food safety both in Alberta and in Canada. |
| 18 | (PC) Students know what types of pests can be present in food facilities and some basic (and sometimes incorrect) knowledge of control. Students can provide a simple and incomplete explanation of the importance of controlling pests. | Explain the importance of knowing acceptable methods of insect and rodent control within a food establishment relevant to food protection ***– Adapted to: Identify the common pests associated with food facilities, their habits and non-chemical methods of control. Explain the importance of controlling pests in order to maintain food safety.*** | Acquisition of knowledgeNote: this learning outcome was adapted to better suit the knowledge required to answer exam questions, the desired capabilities of food operators and reduce the importance of understanding chemical control as this is the role of a pest control operator |
| (DC) Students are confident in identifying common pests, can explain their general habits and articulate what can be done (with respect to controlling food, water and shelter) to control pests in the food facility. Students understand how pests can contaminate food. |
| 19 | (PC) Few students understand the importance of checking deliveries to ensure food safety and pay little attention to how food and utensils are stored. | List the required ***delivery and*** storage procedures for potentially hazardous foods, dry goods, single service and reusable utensils, and items that may impact food quality/sanitation. ***- Adapted to: List the required delivery and storage procedures for food, utensils and items that may impact food safety and quality.*** | Acquisition of knowledgeNote: this learning outcome was lacking an importance step in the flow of food – delivery and inspection of food. It reduced the importance of inspecting all foods |
| (DC) Students understand the importance of checking food deliveries for both quality and food safety and know the appropriate storage procedures of all food, utensils and other items such as chemicals that can impact food quality and safety. |

Table 2: Additional needs statements, objectives and learning types

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Paired Needs Statements** | **Corresponding Objective(s)** | **Type of Learning (domain)** |
| 1 | (PC) Most students have a poor understanding of the concept that serving good quality and safe food is important for business.  | Reflect on acquired knowledge and share their opinions on serving safe food. | Changing attitudes, beliefs, values, and/or feelings |
| (DC) All students reflect and possibly have a change in attitude and beliefs about the concept that serving good quality and safe food is important for business.  |
| 2 | (PC) Students aren’t familiar with how to use food thermometers. | Demonstrate how to properly use a thermometer to check storage, cooking, holding and dishwasher temperatures. | Developing psychomotor skills |
| (DC) Students know how to properly use food thermometers for checking storage, cooking, holding and dishwasher temperatures. |
| 3 | (PC) Many students are unfamiliar with how to test the concentration of food sanitation chemicals using the appropriate test strips. | Demonstrate how to test the concentration of both chlorine bleach and Quats chemicals using the appropriate test strips. | Developing psychomotor skills |
| (DC) Students are confident testing the two most common types of sanitizers with test strips. |
| 4 | (PC) Students have some knowledge on proper hand washing but often lack knowledge of the proper sequence and why to use soap. | Demonstrate how to properly wash hands and state the steps for hand washing. | Developing psychomotor skills and acquiring knowledge |
|  (DC) Students can wash hands using the proper sequence and articulate the importance of the steps, including using soap.  |
| 5 | (PC) Students have some ability to recognize correct and incorrect food safety practices in a food facility. They often can’t explain why some practices are problematic but can at times know how to remedy them. | Recognize correct and incorrect food safety practices in a typical food facility, can deconstruct why some practices are problematic and evaluate remedies for the problems. | Strengthening problem-finding and-solving capabilities as well as enhancing cognitive skills |
| (DC) Students have a strong ability to recognize correct and incorrect food safety practices in a food facility and can explain why some practices are problematic and how to remedy them. |

Types of learning to be fostered

A course, as defined by Sork (1984), is designed to update or deepen the knowledge of those in a particular field, in this case, the food industry, and focuses on communication and acquisition of information in a short time frame. The learning objectives lead themselves to foster acquisition of knowledge that will provide the participants with a solid food safety knowledge base. The planning team and learner community also value gaining practical skills related to safe food handling and therefore some psychomotor skills are anticipated to be achieved by the students through the learning objectives. Another value was to strengthen problem solving and-finding capabilities and cognitive skills so that the students are more prepared to apply the knowledge in reality and thus several learning objectives relate to this type of learning. Finally, although time is a constraint for this course, the planning team was adamant that some time would be designated for learning that focused on changing attitudes, values, beliefs, and or feelings and that at least one specific learning objective focused on this type of learning.

# Design of instructional plan

Program schedule

The program schedule consists of two sessions:

* pre-study session
* in-class session (6 hours of instruction, 2 hours of examination)

The pre-study session provides an opportunity for students to become familiar with the key concepts of food safety and to develop some basic capacity for many of the learning objectives to be achieved. The following two tables provide a brief overview of the program schedule. An important note is that there is a pre-existing manual from the longer two day course that will be utilized for the new one day course. The course schedule is designed around the ten chapters in the manual and will make use of the summary information available and the practice quiz questions. Many learning objectives are intertwined in the different course chapters and in some specific activities, as is clarified in the Table 5: Instruction Plan, in the following section.

Table 3: Pre-study session

|  |  |
| --- | --- |
| **Time or Duration** | **Activity** |
| 2-4 hrs\* prior to in-class session\*will vary among students | Read through [home study booklet online](http://www.calgaryhealthregion.ca/publichealth/envhealth/education/documents/Home_study_course_with_exam_edited_May_31_2012.pdf) or printed copy. Complete review questions, review answers and attempt final quiz. |

Table 4: In-class session

|  |  |
| --- | --- |
| **Time or Duration** | **Activity** |
| 8:00 – 8:25  | Introductions and icebreaker activity |
| 8:25 – 8:35  | Presentation and website exploration: Public Health Inspection of Food Facilities |
| 8:35 – 8:40 | Practice quiz: Chapter 1 |
| 8:40 – 8:55 | Video: Introduction to Microbes |
| 8:55 – 9:15 | Fill in the blank activity: microbes |
| 9:15 – 9:25 | Presentation: Foodborne Illness |
| 9:25 – 9:35 | Break |
| 9:35 – 10:00 | Small group activity: meet the germs |
| 10:00 – 10:10 | Practice quizzes: Chapter 2 & 3 |
| 10:10 – 10:20 | Video: Receiving and Storing |
| 10:20 – 10:35 | Case Study: Alice inspecting and storing food |
| 10:35 – 10:40 | Thermometer demo |
| 10:40 – 10:45 | Practice quiz: Chapter 5 |
| 10:45 – 11:10 | Bingo: Review of safe food preparation |
| 11:10 – 11:15 | Practice quiz: Chapter 6 |
| 11:15 – 11:25 | Video: Dishwashing and Sanitation |
| 11:25 – 11:45 | Chem lab activity: sanitation |
| 11:45 – 11:50 | Practice quiz: Chapter 7 |
| 11:50 – 12:00 | White Space |
| 12:00 – 12:40 | Lunch |
| 12:40 – 12:50  | Class discussion: hygiene practices  |
| 12:50 – 1:00 | Video and discussion: Why, When and How for Handwashing |
| 1:00 – 1:15 | Glo-germ activity |
| 1:15 – 1:20 | Practice quiz: Chapter 4 |
| 1:20 – 1:30  | Presentation: common pests in food facilities |
| 1:30 – 1:40  | Personal reflections and class discussion: controlling pests |
| 1:40 – 1:45  | Practice quiz: Chapter 9 |
| 1:45 – 1:55 | Presentation: Design for food facilities |
| 1:55 – 2:20 | Personal reflection and class discussion: managing for food safety and transfer of learning plan |
| 2:20 – 2:40  | Review and Enhancement of icebreaker activity |
| 2:40 – 2:50  | Practice quizzes: Chapter 8 & 10 |
| 2:50 – 3:00 | White Space |
| 3:00 – 3:10 | Break |
| 3:10 – 5:10 | Allotted time for exam |

Instructional plan overview

A more detailed instructional plan provides detail on the learning objectives, key points to emphasize and instructional time. In most cases, the learning objectives are partially covered in the pre-study but will be further explored in the in-class session. Due to the fact that students are expected but not 100% required to complete the pre-study, the focus of the instructional plan will be based on the in-class session only, with the understanding that baseline knowledge will be obtained through the pre-study, life experiences and past educational sessions completed by the student.

Also, please note that students have the opportunity to complete practice questions based on most learning objectives (the exception being learning objectives #18, #19 and #20). Time to complete these questions is after activities related to the chapter(s) are completed. These questions are normally only reviewed by inquiry by a student as answers are provided in the manual and previous experience has shown that students tend to complete these ahead of time during breaks and lunch.

The estimated time for each learning objective, found in Table 5, only provides some indication of the time that will be dedicated to the learning objective as many objectives are intertwined throughout the pre-study and in-class session and therefore an exact amount of time dedicated to the objective is difficult to determine in some cases.

Looking at the Table 4 and 5 it is apparent that there are numerous types of active learning activities. As identified by Caffarella, motivation and attention are more easily achieved by getting participants personally involved with the material (2002). The instructional plan is also devised to help meet Chickering and Gamson’s Seven Principles for Good Practice in Undergraduate Education (1987) including:

* Encouraging contact between the students and instructor through class discussions and personal learning time where students can interact with the instructor in both group and one-to-one scenarios.
* Developing reciprocity and cooperation among students through the inclusion of many group activities and class discussions.
* Encouraging active learning where the students are actively participating in the activities throughout the course. Only 1.5 hours of the 6 hour in-class session is passive learning through presentations and videos.

Instructional plan details

The in-class session begins with introductions and some basic information to get the students comfortable and then the students get to know each other and start sharing with each other their knowledge and life experience with an ice-breaker activity that has been used successfully with many groups: discussing good food safety practices in small groups. The groups come up with a list of 8-10 practices, both accounts of home and commercial practices are discussed and listed on flip chart paper that is posted around the room and discussed as a larger group. This activity provides the students a chance to acknowledge the understanding they bring to the class which is an important consideration in organizing content (Caffarella, 2002). The activity also considers the knowledge of others and creates a base for students to build new knowledge upon.

The course then shifts to a short presentation on food safety in Alberta and the opportunity to explore the Alberta Health Services website to see where they can go for additional information after the course as well as some interesting aspects including restaurant inspection postings.

In Caffarella’s Exhibit 9.4: Guidelines for Organizing content, she recommends introducing key concepts early (2002) and therefore it was decided that the introduction to microbes, that introduces many of the key concepts and terms that will be revisited throughout the course should be included early in the day. The section begins with an introductory video that explains microbes, foodborne illness and reiterates some good food safety practices. Once the students have some basic knowledge, the program switches to active learning whereby students complete a fill in the blank sheet based on the video and materials available in the manual. The sheet is discussed and then the students have an opportunity to test their knowledge on their own by completing review questions.

The program then moves towards a short 10 minute lecture on foodborne illness to ensure basic background information is provided on the subject. At this point (1.5 hrs into the course), a 10 minute break provides students the opportunity to take care of their personal needs. After the break, students are drawn quickly back into the course by working in small groups to create a short 2 minute presentation on a “germ.” They choose a stuffed toy germ, find out what it is, where it comes from, what type of symptoms it produces and a couple of interesting facts and then presents this information to the class. After the presentations, the students have time to review the chapter information on their own by completing chapter 2&3 review questions.

The next section starts with a ServSafe video that presents what to look for when receiving food and how to properly store delivered goods. From this video and the knowledge the students bring to the class, they then spend 15 minutes going through a case study where they identify the good and bad practices. This is discussed in small groups where they are encouraged to provide suggestions of how to improve the situation. As this chapter introduces the concept of using a thermometer, a demo on thermometers is given and students are provided a thermometer to take back to their workplace or home. The chapter ends with five minutes to complete the review questions.

The safe preparation of food, is a topic that is greatly emphasized in the pre-study and already introduced in earlier activities. Therefore, a fun and interactive bingo game is played in order for the students to recall the information such as food storage and preparation temperatures. Each student is given a bingo card with answers to food preparation questions. The instructor reads out a food preparation question, the students then look on their bingo card to see if they have the answer (they are asked to not answer the question out loud for ten seconds so that all students have a chance to think about the answer). They place a button on the answer, the instructor explains any additional details and the game continues until all students complete the “picture frame” version of bingo and get to say “BINGO.” This section ends with another opportunity to recall the information through the answering of review questions.

Dishwashing and sanitation is introduced by showing a video so that students unfamiliar with the process can easily put the information into context. The learning is then applied to the specific context of the Alberta Food Regulation by carrying out a search for the guidelines in Alberta and then by completing the Chem Lab activity whereby the students test chemicals using test strips and identify the concentrations of the chemicals in small groups. This is an important inclusion of the course as it is a practical skill that is needed in a food business. Like for other chapters, there is an opportunity to complete the review questions.

This completes the morning schedule which is designed so that the most critical information is taught in the morning which Caffarella states is a key guideline for organizing content (2002). There is ten minutes of white space prior to lunch and then a scheduled 40 minute lunch break. This provides some flexibility for the lunch time allowing the instructor to get back on track after lunch. Students have plenty of time to eat (it is recommended that students bring lunch if a food facility is not available onsite), take some time outside of the classroom, and go through more of the information in the manual if they wish.

The afternoon begins with an informal discussion on hygiene practices, something familiar to the students and easily reengages them in the course. A short video that show the transmission of microbes through the fecal-oral route, when food workers should wash their hands and how to properly wash hands is shown and discussed. The students then have the opportunity to explore their own practices with the glo-germ activity whereby lotion that glows under a UV light is put on their hands to simulate real germs. They look at their hands under the UV light, go wash their hands and then look at their hands again to see how good of a job they did. This activity highlights the areas students miss and the importance of using soap and friction. The section ends with the chapter review questions.

The next section speaks to the common pests that are found in food facilities in Alberta. After a short lecture, students spend a few minutes reflecting on practices to control pests. These ideas are shared with the class and then students confirm their knowledge by completing the review questions.

There is a short lecture on design for food facilities, which ensures that the most important factors are introduced to the students (including potable water). The course then shifts to a class discussion of managing for food safety. The discussion is mostly free flowing but the instructor ensures that some discussion on identifying hazards and critical control points as well as dealing with foodborne illness in staff and customers is included. The students are then given time to personally reflect on their practices, what they would like to improve on and how they could do this when they return to their workplace or home. The students are encouraged to write down their thoughts for review and further consideration and are then invited to share their thoughts with the small group they have work with throughout the course.

As a final interactive activity, students are asked to review the 8 – 10 statements on good food safety practices they developed at the beginning of the course and alter and/or expand the statements and add new practices. This provides an opportunity for students to acknowledge their enhanced learning. The groups then present two to three of their statements. There is some time for the students to complete the chapter 8 &10 review questions and have at least a ten minute break to prepare for the exam. It is at this point as well that the course evaluation is given to students.

After the break, students are given two hours, as per Alberta Health guidelines, to complete the exam, although most students will complete the exam in less than one hour. Once students hand in their exam and evaluation, they are considered to have completed the course. Any students not meeting the passing requirement of 70% would be required to rewrite the exam at a later date.

Please note that there is no formal assessment provided in the in-class session, only informal and self assessment through class discussions, activities and the completion of practice quizzes. The formal assessment part of the course is the exam. Details on the reasoning behind the assessment are provided in Evaluation section of this plan.

Table 5: Instructional plan

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Learning Objectives** *The participants will be able to:* | **Content Heading** | **Key Points to Emphasize** | **Instructional Techniques** | **Estimated Time** |
| 1 | Describe why personal hygiene of a food service employee is important to the prevention of food borne illness. | Hygiene Practices | * Transmission routes & chain of transmission
* Term “Carrier”
 | Class Discussion, Video (Why, When and How) & Glo Germ Activity | 10 minutes |
| 2 | Describe the appropriate steps to be taken by the person in charge, in dealing with an employee who has a condition that may cause foodborne illness in others. | * Hygiene Practices
* Managing for Food Safety
 | * Reiterate transmission routes
* Report to health department
* Send employee home
 | Class Discussion | 7 minutes |
| 3 | List the most common diseases that are transmittable through food, the common sourcesand describe the symptoms associated with these diseases. | Foodborne Illness | * Most common illnesses
* Source of pathogen (germ)
* Symptoms
 | Lecture & Activity: meet the germs | 25 minutes |
| 4 | Explain the significance of time and temperature relationships in the growth of microorganisms associated with foodborne illness. | Microbes | * Conditions for survival and growth of microbes
* Danger Zone
 | Video & Activity: Fill in the blanks  | 20 minutes |
| 5 | Identify the hazards involved in the consumption of raw or under cooked high-risk foods including (but not limited to) meat, poultry, eggs, fish, fruits and vegetables. | Microbes | * Contamination of food (source and transmission of microbes)
 | Video & Activity: Fill in the blanks | 15 minutes |
| 6 | Describe why proper food handling practices are important for the prevention of foodborne illness. |  - Microbes - Foodborne Illness - Food Preparation - Cleaning and Sanitizing |  - Transmission of microbes - Conditions for survival and growth - Hygiene - Why kill microbes | Intertwined throughout entire course | Intertwined throughout course |
| 7 | List the required temperatures for the safe freezing, thawing, refrigeration, cooking, cooling, hot holding, cold holding and reheating of potentially hazardous food. | - Food Preparation | * Freezer, fridge, hot holding, cooking, reheating, thawing and cooling temperatures
 | Bingo | 25 minutes |
| 8 | Explain the importance of providing proper equipment and facilities for the prevention of food borne illness. | Design and Maintenance | * Acceptable materials
* Preventative maintenance
* Link between unsanitary facilities and food borne illness
 | Presentation | 5 minutes |
| 9 | Describe the correct procedures for cleaning and sanitizing utensils and food-contact surfaces and define the meaning of the two terms – cleaning and sanitizing | Cleaning and Sanitizing | * Definitions of terms: cleaning and sanitizing
* Dishwashing procedures for manual and mechanical dishwashing
* Appropriate chemicals
 | Video & Chem Lab activity | 25 minutes |
| 10 | Describe what potable water is and measures to take if water might be contaminated. | Design and Maintenance  | * Term potable
* What to do when there is a boil water advisory
 | Presentation | 5 minutes |
| 11 | Describe how to safely store, dispense and dispose of chemicals used in a food facility. | Cleaning and Sanitizing | * Label chemicals
* Store away from food
 | Video | 5 minutes |
| 12 | Identify hazards, critical control points and the associated control steps to safely preparing food. | Management of Food Safety | * Reiterate hazards in food
* How to control hazards
 | Class Discussion | 5 minutes (but additional time leading up to final discussion) |
| 13 | Describe the correct procedures for dealing with a foodborne illness complaint. | Management of Food Safety | * Handle politely
* Take down information – don’t diagnose
* Contact Health Department
 | Class Discussion | 5 minutes |
| 14 | Identify relevance of the Alberta Food Regulation. | Introduction to Food Safety | * Why is the regulation important to the students
 | Presentation | 5 minutes |
| 15 | Identify the government agencies relevant to food service operations and explain their roles | Introduction to Food Safety | * AHS
* CFIA
* Health Canada
* Alberta Health
 | Presentation | 5 minutes |
| 16 | Identify the common pests associated with food facilities, their habits and non-chemical methods of control. Explain the importance of controlling pests in order to maintain food safety. | Pest Control | * Mice, cockroaches, ants and flies
* Don’t provide food, water, shelter (their needs)
 | Presentation & Personal reflections and class discussion | 20 minutes |
| 17 | List the required delivery and storage procedures for food, utensils and items that may impact food safety and quality. | Receiving and Storing Food | * What to look for when inspecting
* Proper storage
 | Video & Case Study | 25 minutes |
| 18 | Reflect on acquired knowledge and share their opinions on serving safe food. | Management of Food Safety | * What is important to the students
* What changes are they planning on making
* How can they help build a positive food safety culture
 | Personal reflection & class discussion | 25 minutes |
| 19 | Demonstrate how to properly use a thermometer to check storage, cooking, holding and dishwasher temperatures. |  - Receiving and Storing Food - Cleaning and Sanitizing | * How to use the thermometers provided to the students
* C/F switch, on/off switch
* Tip sensitive probe
* How to clean
 | Demonstration | 5 minutes |
| 20 | Demonstrate how to test the concentration of both Chlorine Bleach and Quats chemicals using the appropriate test papers. | Cleaning and Sanitizing | * Use the appropriate test strip for the chemical
* Read labels on chemicals and test strips
 | Chem Lab Activity | 20 minutes |
| 21 | Demonstrate how to properly wash hands and state the proper steps for hand washing. | Food Handler Hygiene | * Proper technique
* Importance of soap
 | Video & Glo Germ Activity | 25 minutes  |
| 22 | Recognize correct and incorrect food safety practices in a typical food facility, can deconstruct why some practices are problematic and evaluate remedies for problems. | Integrated throughout course | * What are the correct procedures
* Why practices are correct or incorrect based on knowledge of microbes
* Stop and take yourself out of the situation
 | Intertwined but completed with personal reflection and class discussion | Intertwined |
| **Instructional Aids, Materials, Equipment:*** Projector, laptop, speakers, laser pointer, extension cord, blank wall or screen for PowerPoint presentations, internet (when possible)
* PowerPoint presentations
* Flip chart paper and markers for Ice Breaker activity, meet the germs, class discussions
* Chem lab materials (test strips, chemicals and various chemical containers)
* Stuffed microbes for meet the germs activity
* Bingo game (25 sets plus question sheet)
* Thermometers for thermometer demo
* Manuals and exams
* Pens and tape
* Photocopied sheets for: Chem lab, case study, fill in the blank microbe activity (25 copies)
* Glo germ and UV light
* Videos (FoodSafe Section 2, ServSafe Receiving & Storage and Dishwashing, Handwashing Why, When and How)
* Appropriate and available handouts (including thermometers and test strips)
* Name tent cards and markers
 |

Description of room arrangement

Students are placed in a team style arrangement (made up of two standard rectangle tables) of four students, arranged around three sides, to encourage interaction with other students and for ease of organizing group work (Caffarella, 2002). The arrangement also allows students to comfortably view the lectures, while maintaining table space for them to place their manuals and personal items. The location of the instructor is flexible depending on the activity but the instructor will be located near the front of the room to present the lectures. During videos, the instructor has a place to sit on the side of the room. During activities and breaks, there is a lot of space for the instructor and students to move around the classroom. The PowerPoint lectures and videos are typically presented at the front of the room as this is where most screens are and students are arranged to easily view the screen.

# Administrative plan

Marketing strategy

The marketing strategy is fairly straightforward as there are already successful marketing practices in place and the course offering (although not the change in design) is already known by the target audience. The most valuable marketing tactic is word of mouth provided by Public Health Inspectors communicating information on the redesigned course while visiting food facilities for scheduled inspections. In order for this tactic to work, an email “InfoAlert”, which is the standard department protocol of alerting staff of changes to policies and procedures, will be sent to all Public Health Inspectors and Environmental Public Health staff, letting them know of the changes to the course. To assist the inspectors, a handout will be developed, printed and provided to the inspectors by May 1, 2013 to give to food operators. This same handout will be included with the annual food permit and invoice that is sent to food facility owners during the summer. This method has been tested in the Calgary Zone in previous years and is a low cost and effective means to ensure that information reaches all food facilities.

The announcement will also be highlighted on the department’s website main page as well as its course information pages by May 1, 2013. The information will be sent to Alberta Health Services Communications team for distribution as they feel is justified, as this is the standard protocol for Alberta Health Services.

Table 6: Marketing plan

|  |  |
| --- | --- |
| **Program name and proposed date** | AHS One Day Food Safety Certification Course**Offered:** 2 – 4 times a month in most zones**Class Time:** 8 am – 3 pm**Exam Time:** Students are provided 2 hours to complete exam. Most students require no more than 1 hour. |
| **Target Audience** | Food operators, managers and owners requiring provincial certification in food sanitation and hygiene in Alberta |
| **Types of promotional material to use** | * Announcement on website
* Handout given by Public Health Inspector visiting facility
* Handout sent with annual food handling permit documentation
* Word of mouth by inspectors and previous course attendees
* Announcement provided to AHS Communications team
 |
| **Target time for distribution** | Preparation of handout: April 1 – April 15, 2013Preparation of announcement for website: April 1 – April 30, 2013Proof approval of handout: by April 19, 2013Printing and delivery of handout: by April 26, 2013Announcement on website: May 1, 2013Public Health Inspectors notified of the change in course design (InfoAlert) and available handout: May 1, 2013Announcement provided to AHS Communications: May 1, 2013Handout given to facilities during scheduled inspections: May 1 – December 1, 2013Official One day course launch: June 1, 2013Handout sent with annual food handling permit documentation: Summer 2013 |
| **Proposed cost** | Printing: $3000 (30,000 copies at 10 cents/copy)Distribution: $2000 (additional cost of adding handout to pre-scheduled mail out)*\* Additional development costs are listed in the budget.* |

Budget

The budget has been designed to highlight the hours and therefore indirect cost of developing the course, marketing the course and evaluating the course, which is being carried out by EPH Quality team members involved in the planning of this course re-design. The indirect cost of rolling out this redesigned program for Health Educators will be their time to prepare for teaching the redesigned course. The indirect cost of clerical in the development of the course is related to their training on changes they may need to make to their practices. At this point, it is not possible to provide an exist number of Health Educators and clerical that will be involved as it tends to vary, and management will likely change how many inspectors and/or clerical are involved with Health Education with the redesign of the course.

It is estimated that the development time will be 120 hours (including 8 hours to redesign the work sheets) and that each Health Educator will spend about 24 hours or 3 days getting familiar with the redesign. The marketing of the course will take approximately 26 hours for the planning team to complete. This time works out to an indirect cost of salary fees of $6570 for the planning team members, $1080 for **each** Health Educator teaching the redesigned course, and $25 for **each** clerical staff that needs to be acquainted with the new course. Costs associated with printing and distributing marketing materials is a direct, fixed cost of $5000.

Evaluation of the redesigned course will result in a commitment of 32 hours ($1440) by the planning committee, as well as 2 hours by **each** Health Educator and **each** administrator to attend a feedback meeting and evaluation.

The cost of running the courses has been calculated for a typical course of 22 participants at an AHS sponsored location, with AV equipment previously purchased. Fixed (indirect) costs relate to the clerical and Health Educator hours which will be roughly 12 hours for each Health Educator ($540) and 8 hours for each administrator ($200).

Varying costs relate to the worksheets, manuals, thermometers, test strips, chem lab supplies and coffee that are provided to the students. Basing these costs on 22 students, the total costs would be: $385, or $17.50 per student.

This works out to a total cost of running a course of approximately: $1406 ($1125 + $225 for overhead + $56 for contingency) and results in a profit of $1344. This provides enough profit to quickly cover planning team overhead, development, marketing and evaluation course costs as well as making sure that courses with lower enrolment can still move forward while covering direct costs and instruction and administration time of that particular course.

It has been decided that the registration fee will remain at $125 as it is a competitive rate and is the rate preferred by EPH management to keep the course cash positive and to continue to provide an important source of revenue for the department.

Table 7: Income sources

|  |  |
| --- | --- |
| **Income Source** | **Amount of Income/Subsidy** |
| Parent organization subsidy (Environmental Public Health Quality and zone budgets) | Amount necessary to cover costs of developing, delivering, marketing and evaluating the program. Costs to be recuperated over time through course offerings. |
| Participant fee ($125 X 22 participants) **per class** | $2750 |

Table 8: Expenses

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Budget Items** | **Develop****Costs** | **Delivery Costs\*** | **Evaluation Costs** | **Sub-total Direct Costs** | **Sub-total Indirect Costs** |
| **Internal Staff**Program PlannersInstructorsTechnology specialistsClerical and other support staff | 120 hours16 hours-1 hour | -12 hours-8 hours | 32 hours2 hours-2 hour | ---- | 152 hours44 hours-11 hours |
| **Instructional Materials**PowerPoint presentationsManualsVideotapesWorksheetsChem labStuffed Toy Germs | $0 pre-existing$0 pre-existing$0 pre-existing$8 included$0 pre-existing$0 pre-existing | -$132-$5$10- | ------ | ---$5$10- | ---8 hours-- |
| **Student Giveaways**Thermometers Chlorine test stripsHandouts | $0 pre-existing$0 pre-existing$0 pre-existing | $154$440 \*\*\* |  - - - | $154$44- |  --- |
| **Facilities**Large meeting roomParkingSignage | --$25 | $0$0 | --- | --$25 | --- |
| **Food**Coffee for participants | - | $40 | - | $40 | - |
| **Equipment**LaptopProjectorSpeakersLaser Pointer | $0 pre-existing$0 pre-existing$0 pre-existing$0 pre-existing | ---- | ---- | ---- | Covered in overhead |
| **Marketing Plan**Target and contextual analysisPromotional materials* Design
* Purchase
* Printing
* Distribution/mailing
 | 8 hours16 hours1 hour-1 hour |  --$3000\*\*$2000\*\* | ----- | ---$3000$2000 | 8 hours16 hours1 hour-2 hours |
| **General Costs**Overhead (20%) – per courseContingency (5%) – per course |  | $225$56 |  |  |  |

*\* Delivery costs based on a typical 22 participant course*

*\*\* One time fixed cost for marketing*

Administrative plan

The administrative plan for this program involves two key components:

1. Course development, marketing and evaluation; and
2. Hosting a course.

For the course development, marketing and evaluation, most administrative tasks will be undertaken by the planning committee and in particular the key program developers: Jenny Brown, Theresa Wawrykow and Keara Shaw. Involvement from the other stakeholders comes into play for the review of the instructional, marketing and evaluation plans. A prerequisite for moving forward with the course development is the approval of the redesigned course by Alberta Health. It is imperative that this request for approval is submitted early (there are no anticipated reasons why the approval wouldn’t be granted) so that the course can be launched according to the plan provided in Table 9. The supervisor of the Quality team has been enlisted to carry out this task.

To summarize the administrative plan: it is anticipated that the instructional plan will be developed and finalized January through to March 2013. The marketing and evaluation strategies will be developed and finalized by the end of April 2013. The program launch will be announced May 1st 2013, followed by a month for Health Educators and administrative staff to familiarize themselves with the redesigned course so that the course can be offered throughout the province by June 2013.

Table 9: Administrative plan for course development, marketing and evaluation

|  |  |  |  |
| --- | --- | --- | --- |
| **Start Date** | **Completion Date** | **By Whom** | **Activity Summary** |
| Jan. 1 2013 | Jan. 15 2013 | Shauna Dimock | Submit request for approval of redesigned course by Alberta Health\* *AH has estimated that it will take 2 months to receive approval* |
| Jan.1 2013 | Feb. 28 2013 | Jenny Brown, Keara Shaw & Theresa Wawrykow | Develop instructional plan |
| March 1, 2013 | March 15, 2013 | Stakeholders | Review and provide feedback on instructional plan |
| March 15, 2013 | March 31, 2013 | Jenny Brown, | Finalize instructional plan |
| April 1, 2013 | April 30, 2013 | Jenny Brown, Keara Shaw & Theresa Wawrykow | Design and have marketing materials ready as indicated in the Marketing Plan (Table 6) |
| April 1, 2013 | April 15, 2013 | Jenny Brown, Keara Shaw & Theresa Wawrykow | Prepare evaluation strategy |
| April 16, 2013 | April 23, 2013 | Stakeholders | Review and provide feedback on evaluation strategy |
| April 23, 2013 | April 30, 2013 | Theresa Wawrykow | Finalize evaluation strategy |
| April 15, 2013 | May 1, 2013 | Jenny Brown, Keara Shaw & Theresa Wawrykow | Prepare and disseminate redesigned course to appropriate stakeholders |
| May 1, 2013 | May 31, 2013 | Health Educators and Admin | Familiarize with redesign of course and take appropriate measures to be ready to offer course starting in June 2013 |

In order to ensure the smooth operation of the course, regardless of the location, a standard administrative plan (Table 10) has been developed which considers the necessary tasks for hosting a one day course throughout the province of Alberta. As the course will be hosted in a variety of locations and organized by different Health Educators and administrative staff, the plan may need to be adapted to fit the local conditions and additional tasks added as necessary.

 The **By Whom** section has been left intentionally blank in Table 10, as it will be necessary for the program coordinator for each course to determine the appropriate roles of the staff involved in the program. Most often, a local Health Educator or administrative staff member will complete the tasks and some tasks will fall under the role of the program coordinator, which often is a local Health Educator. In order to ensure that the necessary materials, rooms and AV equipment are available, courses should be organized no less than one month in advance. Information regarding participants’ successful completion of the course should be provided to Alberta Health as a csv. file two days following the course. Participant evaluations should be reviewed within one week of the course, information sent to Quality team if necessary and changes to practices and procedures made as required.

Table 10: Administrative plan for coordinating and hosting a course

|  |  |  |  |
| --- | --- | --- | --- |
| **Start Date** | **Completion Date** | **By Whom** | **Activity Summary** |
| > 1 month prior  | >1 month prior \* | *Intentionally blank. Should be filled in as appropriate for each course.* | Book room for course. *Ensure room has good lighting, ventilation, comfortable temperature, necessary outlets, screen or blank wall, enough chairs and tables. Consider special needs requirements.* |
| > 1 month prior | >1 month prior | Confirm instructor, back up instructor and administrative support. |
| Once room and instructor are confirmed | >1 month prior | Make the necessary arrangements for advertising the course. *Make handout/ add details to website/ inform inspectors and admin staff.* |
| > 1 month prior | >1 month prior | Confirm required numbers of manuals, thermometers, test strips and exams. Order more from Quality team as necessary. Ensure access to AV equipment. |
| 15 days prior | 10 days prior | Confirm enrollment. Cancel course if enrollment is lower than required. |
| 1 week prior | 1 day prior | Order coffee and other refreshments.*Ensure there are adequate cups, sugar, cream, napkins, etc.* |
| 1 week prior | 1 day prior | Organize handouts, activity sheets, exams and supplies required for course (markers, flip chart paper, etc.) |
| 1 week prior | 2 days prior | Check AV equipment, have contingency plan in place if AV equipment fails. |
| 2 days | ½ hr prior  | Set up room, handouts, AV equipment, etc. |
| Day of course | Day of course | Ensure adequate administrative support for answering questions regarding facilities/parking/ assisting with registration. |
| After course | 2 days after course | Mark exam, input information into excel file or other registration management system. Send csv. file to Alberta Health. |
| After course | 1 week after | Review evaluations and make necessary changes to course. Send feedback to Quality team if necessary. |

*\* Rooms in large centers often need to be booked more than 1 year in advance.*

Support services

In addition to the administrative plan for hosting a course, it is important that support services for the participants are available. As the participants normally haven’t attended a food safety course before, they may have questions regarding the course content, parking facilities, lunch facilities and the examination process. It is important that administrative support staff are capable of answering these questions and/or can refer the participant to the instructor for the course. Also, an important consideration for the particular learning community that participates in the course, is the support for materials in different languages such as Vietnamese, Chinese, Spanish and Korean to help participants in their understanding of course materials. There is also a need to facilitate the exam in a verbal format for students who are unable to read in English.

The following list provides the typical support that should be available to participants attending the course throughout the province:

 - Clerical will be trained to make sure they are able to provide support to the participants regarding registration, course content, parking, examination and certificate dissemination or are able to connect the participant to the appropriate Health Educator.

 - Clerical and/or Health Educators will provide course materials in the preferred language of the students (if possible) once they are informed by the participant of this need.

 - Health Educators will provide support in the classroom with respect to course content, any personal needs of the participant and also provide support for those who need to have the exam read to them (will enlist another Health Educator to assist the participant or have the participant complete the exam at another time).

 - Front desk receptionist (when available) will provide support for parking, class location and personal needs of the participant.

Contingency plan

It is possible to encounter technical and other difficulties while organizing and offering a course. The following list provides the suggested contingency plan that should be implemented for all courses throughout the province. There may be other potential difficulties specific to the local conditions that may need to be added to this list.

 - In the event that the instructor of the course is unable to teach, a back-up instructor should be available when reasonable (this may not be possible in remote areas).

 - In the event that AV equipment fails, the instructor should have access to IT Help, through the IT Help Desk and/or have access to back-up AV equipment.

 - In the event that there are not enough registrants and it is more than 15 days prior to the course date, the Health Educator or clerical staff can inform Public Health Inspectors of the availability of the course and to please inform their operators.

 - In the event that there are not enough registrants (based on minimum requirements for each zone – typically 15) and it is more than 10 days prior to the course date, the Health Educator or clerical staff can cancel the course and move participants to the next available course.

 - In the event of extreme weather, the Health Educator or clerical staff can cancel the course or allow participants to be moved to the next available course date.

# Evaluation plan

The evaluation plan considers:

1. Student assessment; and
2. Program evaluation

Student assessment

The course is designed so that students acquire the knowledge to pass the provincial examination in food sanitation and hygiene. This achievement is the main reason why participants attend the course and is one of the primary program objectives. Taking a look back at the learning objectives and types of learning fostered, acquisition of knowledge is the primary domain. It is therefore suitable that the evaluation of the students is carried out through the use of a 50 question multiple choice exam as this type of evaluation is considered an appropriate choice for measuring participants’ knowledge and comprehension (Caffarella, 2002; Fenwick, 2009).

The achievement of this certification is what the learners’ strive to achieve and what the stakeholders of the course consider of great importance and therefore, carrying out additional means of formal assessment of the students is not considered to add any value.

Program plan

Due to the nature of the program plan, there are two main components to consider when devising the program evaluation plan:

1. The course package developed by the Quality planning team; and
2. The specifics of each course offering.

Feedback regarding the course package from the various stakeholders involved such as Health Educators, administrative staff, participants, general learning community and interested management will need to be shared to ensure that the product is successful and so that the necessary changes to improve the course are incorporated into future versions of the course package. Intertwined with this evaluation is the evaluation of each specific course which should be made by the local stakeholders of the course including the Health Educator, administrative staff and participants. The Quality planning team will be relying on feedback provided by specific course offerings to help guide changes to the course package.

A starting point for the evaluation plan was devised using the program objectives which “often form the foundation for program evaluation” (Caffarella, 2002). The list of program and operational objectives included in this plan, were utilized to create the course evaluation plan expressed in Table 11.

The program objectives (of which five are learning objectives) are evaluated through the analysis of exam results, participant questionnaires, course activities, observation and feedback from Health Educators. The Quality planning team has created targets for student achievements on exam questions which provide insight on the success of meeting many of the learning objectives. The draft targets are:

|  |  |
| --- | --- |
| Pass provincial exam (receive mark of 35/50) on first attempt. | Target: 90% |
| Pass provincial exam on second attempt. | Target: 100% |
| Exam questions related to food protection agencies and regulations are answered correctly.  | Target: 90% |
| Exam questions related to foodborne illness are answered correctly. | Target: 90% |

In order to monitor the success rate for the provincial exam, Health Educators/admin staff will be required to input data into the SharePoint system within 1 week of completing the course indicating:

* Number of students
* Number of successful students
* Number of unsuccessful students
* Number of successes on second attempt (may be added at a later date as necessary)
* Number of failures on second attempt (may be added at a later date as necessary)

The Quality planning team can then carry out an analysis after three months, six months and then yearly.

In addition to inputting data on exam pass rates, the Quality planning team will be completing surveys of selected courses throughout the province and carrying out an analysis of how students answered exam questions related to food protection agencies, food regulations and foodborne illness. After three months, six months and yearly, the team will solicit information from Health Educators for ten courses. The concerned questions will be identified and pass rates entered into the SharePoint system by the Quality team and the analysis completed. If targets are not reached, research (including informal and formal feedback from the stakeholders) will be carried out to help uncover the potential cause and assist in making changes to the course package and/or instructional techniques as needed. If the research reveals that there is a problem with the exam question, this information will be forwarded to Alberta Health for consideration.

Observation from instructors will provide qualitative feedback on the success of the program package and specific course facilitation. The Quality planning team will host an evaluation meeting three months after the course launch to openly discuss how the course is working and to provide support and suggestions to the Health Educators on improving the success of their individual course offering, as necessary. The Health Educators will also be asked to observe and reflect on their own practices (and participant evaluations) to help improve their facilitation of the course. A formal evaluation of the course, will be completed by each Health Educator after three months, six months and yearly that will assist in answering several of the evaluation questions. This formal evaluation will be adapted from questions in Exhibit 11.4 in Planning Programs for Adult Learners (Caffarella, 2002), Part 1: Session Content and Process. The first evaluation will include questions in the following table.

Table 11: Draft evaluation questions for instructors

|  |  |  |  |
| --- | --- | --- | --- |
| **Question** | No (1) | Somewhat(2) | Yes (3) |
| Were the program objectives clear and realistic? |  |  |  |
| Were the course package materials relevant and valuable to you and the students? |  |  |  |
| Could the materials be presented at an appropriate pace? |  |  |  |
| Was there an adequate amount of time allotted to each topic? |  |  |  |
| Did the instructional and presentation techniques suggested assist you in teaching the material? |  |  |  |
| Were there enough opportunities for the students to actively participate? |  |  |  |
| Did the instructional materials and aids provided in the course package enhance the learning process? |  |  |  |

Another important evaluation tool for many of the program objectives is the questionnaire to be provided to the participants. This draft questionnaire is taken from Caffarella (2002) Exhibit 11.3: Sample Participant Questionnaire (Short Form) although a copy of the long form of the questionnaire will be provided to the course instructor if they wish to add additional questions to be more knowledgeable on their presenter skills, logical arrangements, etc. All Health Educators will be asked to submit evaluations of at least one of their courses after three months, six months and then yearly so that the Quality planning team can provide a summary of the results of questions 1 – 5 of the Draft Participant Questionnaire (Table 12) to stakeholders. The team will also codify and create themes, along with % occurrences, from the information provided from questions 6 and 7 of the questionnaire.

Table 12: Draft participant questionnaire

|  |
| --- |
| **AHS One Day Food Safety Course Date:** |
| *Please circle the ratings that best describe your reaction to the course**1 = No 2 = Somewhat 3 = Yes, definitely* |
| 1. Were the course objectives clear?  | 1 | 2 | 3 |
| 2. Were the instructional techniques and materials helpful in your learning of the material?  | 1 | 2 | 3 |
| 3. Did the instructor focus the presentation and activities on the course objectives and use the instructional techniques and methods well?  | 1 | 2 | 3 |
| 4. The course contributed to my knowledge.  | 1 | 2 | 3 |
| 5. The pre-study (online course booklet) was helpful. | 1 | 2 | 3 |
| 6. Please list any information and/or skills you can use from this course: |
| 7. Please suggest improvements for this course: |
| *Questionnaire adapted from Exhibit 11.3 in Caffarella 2002* |

Two operational objectives that were deemed important by both Health Educators and management are:

1. The need to maintain a quality course; and

2. Help recover the loss in registration numbers that the department has seen in the last few years due to the emergence of one day and online courses by competitors.

It is important that the Quality planning team review and codify participant evaluations to uncover themes related to suggested improvements for the course that can then be acted on as necessary. Also, calculating course registration numbers and comparing these to numbers seen in 2009 (beginning of the decline in registration numbers) and then identifying if targets are been meet, will provide a clear indicator to stakeholders, especially Environmental Public Health Management, that the time and effort put into redesigning the course was well worth the cost.

Evaluation data and analysis will be provided to all Health Educators, appropriate admin staff, Quality team and management (as well as any interested stakeholders such as HR departments of food operations that send participants on an on-going basis to the course) after three months, six months and then yearly. The registrant number comparison analysis will be provided to interested stakeholders by July 31, 2014.

Table 13: Course evaluation plan

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **What we need to know** | **Source of information** | **Technique for obtaining information** | **When** | 1. **Action based on information**
2. **Type of Evaluation (formative, summative)**
 |
| Did students gain the knowledge required to successfully pass the Provincial Examination in Food Sanitation and Hygiene? | Exam results | 1. Develop target criteria
2. Record the number of successes and failures for each course offered.
3. Provide course results to Quality team
4. Perform analysis on results to determine if target was reached
 | 1. Before Apr.30/13
2. After each course
3. One week after course
4. After three months, six months and then yearly
 | 1. Investigation into why students are not passing course. Review questions students are getting wrong, request opinion of stakeholders through surveys and informal interviews.
2. Summative
 |
| Did students gain a repertoire of food safety knowledge that can be used in practice to reduce the risk of foodborne illness when preparing food? | Observation of participants as well as activities and artifacts that surface students’ knowledge | 1. Observation of participants
2. Exam results
3. Transfer of learning plan
4. Questionnaire
5. Expansion of icebreaker activity
6. Review and codify evaluations and instructor feedback to find themes. Record % occurances.
 | During and after each course offeringAfter three months, six months and the yearly | Instructor make changes to facilitation techniques during and after course (formative and summative), notify Quality team of concerns and for assistance after course (summative)Quality team impose course changes based on codified feedback (summative). |
| Did students gain familiarity with the food protection agencies and regulations that impact their business? | Specific exam question results | 1. Develop target criteria
2. Record the number of successes and failures for specific exam questions
3. Provide course results to Quality team
4. Perform analysis on results to determine if target was reached
 | After three months, six months and yearly | Instructor make changes to facilitation techniques (summative)Quality team impose course changes based on analysis (summative) |
| Did students gain an understanding of what foodborne illness is, how it happens, the symptoms and how to deal with foodborne illness complaints or suspected illness in their facility?   | Observation of participants as well as activities and artifacts that surface students’ knowledge | 1. Observation of participants
2. Meet the germs activity
3. Class discussion
4. Technique for specific exam question results:
* Develop target criteria
* Record the number of successes and failures for specific exam questions
* Provide course results to Quality team
* Perform analysis on results to determine if target was reached
 | During and after each course offeringAfter three months, six months and the yearly | Instructor make changes to facilitation techniques during and after course (formative and summative), notify Quality team of concerns and for assistance after course (summative)Quality team impose course changes based on codified feedback and results from exam result analysis (summative). |
| Did students learn practical skills that can be used in the safe production of food in their facility? | Observations and participant questionnaires | 1. Instructor watch students get familiar with thermometer, use test strips, observe results of glo -germ activity
2. Ask self assessment question on student evaluation form regarding practical skills.
3. Review and codify evaluations and instructor feedback to find themes
 | During and after each course offeringAfter three months, six months and the yearly | Instructor make changes to facilitation techniques during and after course (formative and summative), notify Quality team of concerns and for assistance after course (summative)Quality team impose course changes based on codified feedback (summative) |
| Is the high standard of course design and facilitation that the department is known to offer being maintained while ensuring that the classroom portion of the course doesn’t exceed the allotted six hours? | Participant questionnairesFeedback from instructors | Review and codify evaluations and find themes, along with % occurrences. Divide themes into positive and negative categories. Compare results to previous course evaluations from 14 hour course. | After three months, six months and the yearly | Instructor make changes to facilitation techniques during and after course (formative and summative), notify Quality team of concerns and for assistance after course (summative)Quality team impose course changes based on codified feedback (summative)Quality team provide summative feedback to instructors, admin and management (summative) |
| Has a portion of the marketplace lost to competitors been regained to participant levels achieved in 2009 by June 2014? | Participant numbers from 2009 and participant numbers moving forward with new course | 1. Gather course statistics (# of course offerings and # of participants) for the year 2009.
2. Compare these statistics with statistics from June 2013 – 2014 and determine the % change and it if is statistically significant.
3. Complete a six month comparison (Jan 2009-June 2009 vs Jan 2014 – June 2014) as well.
 | Obtain numbers on a monthly basisAnalysis complete by July 31, 2014 | Quality team evaluate marketing plan, participants’ evaluations, instructor feedback to provide insight into any possible changes (summative)Complete an environmental scan of the status of food safety certification courses and participant rates to provide insight into possible changes. Potentially hire an outside contractor to complete the investigation if necessary (summative) |

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