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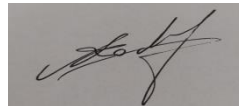


COVER PAGE AND DECLARATION

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Students' Full Name:	ALISTAIR MAXIE ALLWYN RODRIGUES
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I confirm that this assignment is my own work, is not copied from any other person's work (published/unpublished), and has not been previously submitted for assessment elsewhere.

E-SIGNATURE:



DATE:

06/12/2021

EIU Paris City Campus

Address: 59 Rue Lamarck, 75018 Paris, France | Tel: +33188320435 | Mobile/WhatsApp: +33607591197 | Email: paris@eiu.ac

EIU Corporate Strategy & Operations Headquarter

Address: 12th Fl. Amarin Tower, 496-502 Ploenchit Rd., Bangkok 10330, Thailand | Tel: +66(2)256923 & +66(2)2569908 |
Mobile/WhatsApp: +33607591197 | Email: info@eiu.ac

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Mini-Curriculum Creation

European International University

EDUC520: Curriculum & Instruction Planning & Development

December 06, 2021

EDUC520: Curriculum & Instruction Planning & Development

Mini-Curriculum Document on Hygiene, HACCP (Hazard Analysis, critical control point) & Food safety for supervisors

Preliminaries

Philosophy of Education

The food safety alarms in the late 1980s relating to salmonella in eggs, Ecoli 0157, glass in food and the alleged increase in food poisoning from local commercial food businesses resulted in extensive new legislations. The continuous media interest has ensured that food safety & hygiene remains a high priority as death tolls continue to rise from severe allergic reactions, improper food storage, improper temperature control, cross contamination, poor food display strategies etc.

The fact that that Food poisoning outbreaks are preventable and low dose organisms such as E coli have very serious consequences, it is imperative that standards of food hygiene continue to improve around the world in order to save lives. Given this thought, proposed solutions need to be specific, practical, measurable, achievable and based on scientific evidence. Slaughtering chicken due to rise in salmonella in eggs even after imposing all HACCP principles, spending huge amounts of money on audits etc are not the wisest or effective solutions.

Food safety & Hygiene agencies around the world are committed to improving standards in order to reduce mishaps, however this can be achieved if we have effective communication and

timely promulgation from relevant bodies involved in food safety, food safety trainers, consultants, FBO's, caterers, retailers and all food related businesses.

This curriculum is designed to provide supervisors, agencies, auditors, consultants within the food agency with latest information, scientifically approved statistics and food safety advice to enable them to contribute to improvement of standards and reduction of food borne illnesses. The content below is intended to ensure all relevant standards are met, Local and international laws are adhered to and regular updates communicated. I would be pleased to receive feedback, suggestions, opinions or testimonies that could enrich our societies and educate the masses.

Description of Target Audience

This curriculum will ensure Managers are aware of Hazards and controls relating to food business, especially in relation to temperature, microbiological, physical and chemical contamination. They will be able to identify areas that are critical to food safety and implement effective control and monitoring procedures at these points.

Managers, supervisors, Food business operators, caterers, retailers will learn how to stay committed to food safety and keep abreast with latest trends within their work activities so they are competent to produce safe food.

Hospitality graduates, Hotel management trainees, local government bodies, Food safety agencies will profit immensely from this curriculum as they will feel empowered to:

- Reject contaminated food from unreliable sources
- Decontaminate food, for example, by washing
- Protect food from contamination of any kind, including effective cleaning, disinfection

of food premises and equipment as well as avoid allergic reactions by conduction risk assessments.

- Destroy harmful bacteria in food by through cooking
- Apply HACCP principle as a safety management system effectively

The content is not only limited to commercial businesses but to individuals as well that aspire to learn more about food safety principles, to food equipment manufactures wherein they will be made conscious of various hazards and design flaws that would contaminate food. This would serve as a reminder to governing bodies including law enforcement that are responsible to audit, evaluate and impose fines on businesses, caterers, hotels, restaurants that serve food across the counter or involved with mass production.

Packaging and distribution companies will find this content most interesting as I have provided scientific evidence from government publishing agencies thus keeping them safe from prosecutions.

Industries like cruise ships, flight kitchens that have picked up pace in recent years will find this curriculum most effective due to the nature of its generic yet affective strategies that have been well tested, researched, applied, verified, validated, improvised and re applied. Architects, designers, kitchen design experts, food magazine editors and food lovers too will find fascinating and intriguing facts that will prove an eye opener thus covering a large audience.

Finally all Food Safety Trainers & Training centers across the globe will be able to resonate my thoughts and research, which spans over 15 years from working on land, Ships and flight kitchens.

Goals

As mentioned above this curriculum covers a wider spectrum of audience and is not limited to persons or businesses in the hospitality industry only. It will create consciousness among persons carrying on a food business to have legal, commercial and moral obligations to provide safer food. There will be an awareness around cost affective hygiene and the absolute need to apply HACCP principles. All learners will be able to establish the difference between low risk & high risk foods and Food poisoning & Allergic reactions.

The goal of my curriculum is for learners to be able to:

- Understand and apply scientific principles to Food safety
- Learn food contamination & its prevention
- Understand and apply HACCP principles
- Exercise and supervise Personal Hygiene in food areas
- Design and construct food premises (Galleys)
- Comprehend hygiene legislations

Learning outcomes

By the end of the program:

- Students will be confident to appear for Food safety Level 2 and Level 3 examinations as well as be able to teach the content if they wish to on earning a merit.
- FBO's (Food business operators) will stay equipped with knowledge and if required assign supervisors to appear for advanced courses which is a requisite for local government jobs in law enforcement.
- Food safety Authorities can keep on top of local acts, laws, legislations, regulations, orders, principles nationally and internationally in order to stay compliant.
- Aspirants and food safety experts can customize products for new and existing businesses which ensuring preventive maintenance and cost effective hygiene strategies.
- Management faculties will be able to conduct training need analysis as managers, supervisors and auditors.
- Cruise Ships will be able to meet all Port Health protocols across the world.

Subject Matter / Content

The content of the program is divided into eleven modules and is progressive in nature. Candidates will be subject to learning using 6 levels of Blooms taxonomy. The content has also been developed in a way to provide learners with materials to assist them with planning, preparation and delivery if needed. It also provides a sequence and methods of delivery of modules:

1. Introduction to Food safety
2. Legislation
3. Applying and monitoring good hygiene practices
4. Temperature control
5. Workplace and equipment design
6. Waste disposal, cleaning and disinfection
7. Pest control
8. Personal Hygiene
9. HACCP
10. Food safety management tools
11. Food safety auditing

Discussion points and activities are included in the session to give candidates the opportunity to share opinions and experiences and consolidate learning. Activity sheets have been developed to support certain activities. Candidates are given the option to use a white board or interactive television to present their understanding of relevant content matter.

Scope, Sequence, Integration

As already mentioned above the scope sequence and Integration was designed keeping in mind 6 levels of Blooms taxonomy.

	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Introduction to food safety	Define Food hygiene, food poisoning	Describe trends in reported outbreaks of food borne illness over recent years	Use logic to understand temperature control & identify hazards	Examine impact of new Legislation against old		
Legislation	Recollect food safety laws from 1980's & current	Define & comprehend reasons for creation of clauses.	State the role of supervisors in an outbreak of food illness		Produce & suggest laws to prevent a recurrence	Estimate the impact of due diligence
Good Hygiene Practices	Explain the types of contamination & their control	Describe Binary fission	State the risks caused by allergens in food			

Temperature Control	Types of temperature measuring equipment	Define danger Zone				Assess how temperature can control microbial activity in food.
Work place & equipment designs			Apply latest HACCP principles to a brand new kitchen design	Observe defects and correct the same		
Waste disposal, cleaning and disinfection		Define 6 stages of cleaning & disinfection			Create flow diagram for separation of dry & wet waste	
Pest control	List design features of Suitable food stores	Describe best use of EFK – Insect Fly Killer	Use most appropriate cockroach traps in galleys			
Personal Hygiene				Examine the cause of physical contamination		

HACCP	Recall the first 5 principles	Establish critical limits to high risk food that is on the verge of being spoilt				Evaluate controls, documents for all procedures
Food safety	State benefits of safe food	Describe Linear work flow				
Food safety Auditing		State difference between audit & Inspection			Create Do's and Dont's manual	

Implementation

Identification of constraints

Food safety law is a complex subject and most legislation affecting the industry is difficult to interpret. There are differences in the way that food law has been implemented across the world, however since the law originates from a worldwide governing body, its differences are minor in nature. Ignorance of law is no defense in the event of a prosecution and all managers, businesses must make special efforts to become compliant and aware of legislation that affects their business.

Constraints like the below have or could be visible:

1. Learners may succumb to the overload of information, research and content of this

program.

2. Another constraint that may arise is learners trying to mug up all content in order to simply pass their examinations and earn a certificate.
3. Learners may lose interest not knowing why they are learning specific content.

Actions to minimize them

1. To counter the first constraint there is a formative assessment at regular pre-defined intervals. Teaching faculty is always at the disposal of learners that require guidance, special attention, not forgetting qualified teacher's availability for special needs students.
2. Second constraint has been overcome by organizing practical application of knowledge by ways of outdoor catering and production houses where participants can evaluate themselves and reflect upon the learning in classroom sessions.
3. Learners are given an opportunity to attend lectures from industry specialists. In India for example IAS officers from governing bodies that head food safety legislation offices as well as researchers are invited to take the stage and express their opinions on current affairs related to the food industry. This acts as a motivational factor and students automatically engage themselves in learning.

Learning Experiences (Resources, Activities & Instructional strategies)

This curriculum provides a framework for the delivery of the program including resources like:

- Program guide
- Session plans – including aims and objectives
- Detailed session notes
- Useful resources
- Activity sheets
- Screen presentations
- Power point presentations

The program guide can be used as a basis from which to prepare a suitable training program. The session notes guide the learner through the training program step by step ensuring that all elements of the syllabus are covered in a logical manner. The timings given for the session are a guidance only. Student can adapt accordingly as the syllabus is covered within the specified duration of the program.

The powerpoint presentation provides a visual stimulus to reinforce the key learning points.

The CD ROM contains 2 versions of the slide presentation, a color version for a presentation and a black and white version for printing off notes and handouts. It also contains two versions of activity sheets, one color and one black and white for printing

purposes.

Discussion points and activities are included in the session to give learners to share opinions, experiences and consolidate learning.

Activities like the ones below have been designed to reinforce understanding and revise content that has been thought this far.

1. What are the definitions of...?

Match the following definitions. Write the number in the grid shown below.

A	Contamination	1	The measures and conditions necessary to control hazards and to ensure food is fit for human consumption, i.e. safe to eat.
B	Cross-contamination	2	An acute illness, caused by the consumption of contaminated or poisonous food.
C	Food hygiene/safety	3	Actions to prevent a food safety hazard.
D	Control measures	4	The transfer of bacteria from a contaminated source, usually raw food to ready-to-eat food.
E	Food poisoning	5	The presence or introduction of something harmful (a hazard), or objectionable in food.

A - 5	B - 4	C - 1	D - 3	E - 2
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2. How clean are you?

Tick the statement that is untrue:

- The effectiveness of disinfection is determined by swabbing
- Detergents need to be rinsed off before using a chemical disinfectant
- Any concentration of disinfectant will destroy 90% of pathogens
- Disinfectants need a contact time to work properly

3. Pest control quiz

Circle the correct answers

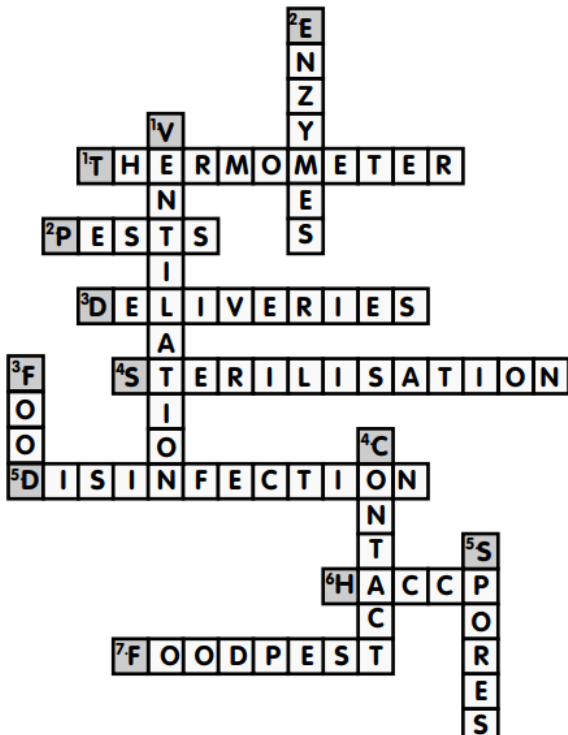
Please note each question has more than one correct answer:

1. Common food pests are:

Wasps Bees Ants Mice Rats flies red squirrels cockroaches

4. How much do you know?

Use the clues to complete the crossword.



ACROSS

1. This can be used to check that food is thoroughly cooked. (11)
2. What do overflowing waste bins in yards attract? (5)
3. What should you check to avoid bringing mice into food businesses? (10)
4. What process destroys all micro-organisms and their spores? (13)
5. Which process reduces bacteria to a safe level? (12)
6. What is a food safety management system based on 7 principles? (5)
7. An insect or animal which contaminates food is a.. (4, 4)

DOWN 1. What needs to be effective in food rooms to keep down room temperature? (11)

2. These spoil food, survive freezing and can be inactivated by blanching. (7)
3. What should be removed from an area in a food room prior to maintenance? (4)
4. Which time must be adequate to ensure effective disinfection? (7)
5. Rapid cooling is essential to prevent these germinating. (6)

5. Salmonellosis outbreak linked to imported sesame-based products:

In groups of 4 discuss the outbreak, conduct a research into the case and according to HACCP principles come up with control measures that will keep the final product safe for consumption.

6. COOK Kitchen recalls Mango and Passion fruit cheesecake and Chocolate and Almond Torte because of undeclared allergens:

Conduct a risk assessment on the case above, explain what action would you take also create allergen alerts and advisories to avoid recurrence.

Evaluation

Student Performance Assessment

Curriculum evaluation intends to scrutinize the impact of executed curriculum on learner knowledge so that necessary changes can be made and improvisations established. It also dictates a review to analyze curriculum effectiveness, Training need Analysis (TNA), continuous adjustments and process of curriculum implementation.

Through Evaluation an organization can establish the strengths and weaknesses, critical information, Inputs for learning and teaching, monitoring, strategic changes and policy decisions of a curriculum.

One of the seven steps of evaluation curriculum by Ralph Tyler (1950) clearly indicate, Selection of criteria of measurement procedures. This entails establishing the measurement of the effective goals and objectives in the curriculum. To this fact you will have noticed above more than 5 ways of evaluating learner performance. Crosswords, match the following, Oral assessments, Group research and kinesthetic style of practical demonstrations.

These means or methods help the faculty gauge learner understanding and if needed improvise or introduce new methods to embed the objective. Once such method also includes an instructor explaining or breaking down questions for a student that is unable to comprehend the question.

Since this program contains 11 main topics, one way of evaluating the learner is via a multiple choice questionnaire through which the faculty can gauge the logic that is applied to arrive to a

conclusion rather than mugging up answers. When learners ask clarification of questions, this is identified as another evaluation process giving faculty a clue that questions need to be re arranged or students require more explanation.

Teacher Performance Assessment

Teaching is intended to modify or develop knowledge, skills and attitude through learning experience and to achieve effective performance in an activity. Teacher performance assessment can influence the safety of food and this is essential to reduce the unacceptable high levels of food poisoning. Management must be convinced of the importance and benefits of assessments in order to provide necessary resources should they be identified as a result of the process

Where teachers are concerned, we follow a cycle called 'Short Takes' where in all of the 11 main topics mentioned in the main content are discussed, one main topic each month. This way at the end of the year all teaching faculty will have covered the entire curriculum themselves. This in turn also prepares them for advanced level examinations should they intend to appear for and are encouraged for the same. Teachers are offered opportunities to participate in inter school competitions, debates, planning and strategy forums. These events keep them assessed at all times and also adds to the value of our learners as appointed teachers engage themselves in making amendments to the instructional design from the learning they gather and bring to the

table.

Teachers are also given the opportunity to deliver special lectures attended by principals and lecturers around the country which acts as a platform for improvement, evaluation and a constant endeavor for adapting to latest teaching practices. Teaching never stops and our teachers never cease to learn.

Summative Evaluation

Summative data is often more closely aligned with accountability, so comparisons can be clear cut, making it easier to identify pupils who aren't where they should be. Summative evaluation can provide an additional understanding of how secure learning is, and a further opportunity to highlight or verify gaps in teaching or learning that justify additional attention. One unique method of achieving this objective is as below:

Summative Assessment:

Module 9 – Hazard Analysis & Critical Control point will be delivered through a combination of class time and directed independent learning.

1. Will you be willing to undertake work in advance of coming to class? Yes/No (Kindly tick)
2. Will you be willing to attend laboratory classes to develop practical and research experimental skills? Yes/No (Kindly Tick)
3. Your report will include aspects of experimental design, data recording, presentation and

analysis and critical evaluation of experiments undertaken.

4. The module is also assessed through a final exam (week 2, 2hours)

Summative exams don't have to be super serious exams. Our program ensures learners are able to show off their skills, hence we perform different types of summative assessments.

- Written assessments: An original piece of research writing, narratives or an analytical essay on HACCP. This allows students to show off their understanding of the 7 principles involved and its practical application.
- Performance assessments: Interactive tasks and activities in house or at outdoor catering events, which allow learners to showcase their abilities to perform in any given setting.
- Standardized assessments : Exams against rubrics
- Oral assessments: Getting learners to give speeches and presentations in order to assess understanding of HACCP, Allergens etc.
- Final project: Getting students to create a work flow chart applying HACCP principles to every step in order to ensure food is not contaminated.

Summative data should be focused on a grade, usually at the end of a unit to review outcomes. They should be standardized and quantitative to support benchmarking, either within a cohort, school or country.

Need for Revision?

In this business people can get killed due to the slightest mistake or negligence. Allergic reactions continue to hound parents when their kids consume a meal in schools and this can be down to the oil that is used, the tongs for serving, the environment food is prepared in, trained or untrained staff, knowledge of the food production team, local supplier's etc. Hence a review of outcomes from recent audits, and inspections is a must.

A review of the HACCP plan and food safety policies will ensure no one gets killed, sued or loose a business. Any deviations including details of action taken, records of food borne illnesses, customer complaints etc need to be recorded diligently.

In our program the HACCP system is revised every 6 months to ensure scientific, legal and best practices are followed. Should there be an outbreak anywhere in the world attributed to the business or a series of complaints we review our systems, brainstorm ideas to overcome the mishap and encourage case studies where in learners and instructors come up with bright ideas.

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