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|--|---|-------------------------------|-------------------------|--|
| 課程名稱   | (中) 香料植物之應用與保健機能(0530)  |                               |                         |  |
|  | (Eng.) Application and Health Function of Spices and Herbs  |                               |                         |  |
| 開課單位   | 通識中心  |                               |                         |  |
| 課程類別   | 必修  | 學分                            | 3                       | 授課教師 古山吉   |
| 選課單位   | 不限系所  | 授課語言                          | 英文                      | 開課學期 1091  |
| 課程簡述   | Historically herbs and spices have enjoyed a rich tradition of use for their unique flavor and healing properties. The rising prevalence of contagious and chronic diseases worldwide and the corresponding rise in health care costs is propelling interest among researchers and the public for these food related items for multiple health benefits, begins with influenza prevention to treatment of cancers. The principle aim of this course is to provide a theoretical and practical knowledge, and specialized skills to distinguish spices and herbs and their potential use in our day-to-day life. The first third of the course will focus on: the historical and cultural significance of herbs and spices; characteristics of herbs and spices and economic importance. The second third will examine the applications and health benefits of herbs and spices. The final third will emphasize the herbs and spices as agriculture commodity and the relevant agriculture practice. |                               |                         |  |
| 先修課程名稱   |   |                               |                         |  |
| 課程與核心能力關聯配比(%)   |   |                               | 課程目標之教學方法與評量方法          |  |
| 課程目標   | 核心能力  | 配比(%)                         | 教學方法                    | 評量方法   |
| <input type="checkbox"/> The overall objective of this course is to improve students understanding of the uses and effects of herbs and spices, including their therapeutic values, on people and their cultures or societies.<br><input type="checkbox"/> Students will learn the role of herbs and spices in agricultural commodity<br><input type="checkbox"/> Students will be introduced to the culinary and traditional healing properties of herbs and spices<br><input type="checkbox"/> Students will gain knowledge in cultivation, propagation and process of herbs and spices<br><input type="checkbox"/> Students will become familiar with the realm herbs and spices widely offered for sale online and in natural food stores for choosing the most effective product at the best value. | 1.人文素養<br>2.科學素養<br>3.溝通能力<br>4.創新能力<br>5.國際視野<br>6.社會關懷  | 0<br>50<br>20<br>30<br>0<br>0 | 專題探討/<br>製作<br>討論<br>講授 | 書面報告<br>出席狀況<br><input type="checkbox"/> 頭報告<br>作業 |
| 授課內容(單元名稱與內容、習作/每週授課、考試進度-共18週)  |   |                               |                         |  |
| week 1 Herbs and spices<br>(Definition, history, scope and importance, global status)  |   |                               |                         |  |
| week 2 Classification of herbs and spices<br>(Classification based on plant parts used, economic importance, climate requirement, origin and flavors, season of growth and botanical description, and commercial classification)   |   |                               |                         |  |
| week 3 Characteristics of species and herbs<br>(Content of the substances, smell, taste and use, combination with other spices)  |   |                               |                         |  |
| week 4 Economic importance of herbs and spices<br>(Demand, market values and producers)  |   |                               |                         |  |
| week 5 Outdoor students activity<br>(Exploration and documentation of spice and herbal plants in and around NCHU campus)   |   |                               |                         |  |

week 6 Primary functions of herbs and spices  
(Culinary herbs and spices, fresh and drying spices, everyday ingredients, wild herbs and spices and essential oils)

week 7 Secondary functions of herbs and spices  
(Preservatives, nutritional, pharmacological and cosmeceutics)

week 8 Potential applications of herbs and spices in functional dairy products  
(Herbs and spices in cheese, butter, yoghurt, labneh, ghee and ice cream)

week 9\* Industrial/laboratory visit  
(Visit an enterprise engaged with herbs and spices)

week 10 Bio-activities of herbs and spices  
(Anti-microbial, anti-oxidant, anti-inflammation, anti-diabetic, hypolipidemic, anti-mutagenic and anti-tumorigenic functions)

week 11 The role of herbs and spices in cancer prevention and therapy

week 12 Herbs and spices as modulators of gut micro-biota

week 13 Processing of herbs and spices

week 14 Applications of spice oils and oleoresins

week 15 Commerce and quality control of herbs and spices

week 16 Propagation and cultivation of herbs and spices

week 17 Legislation and regulation of culinary herbs and spices

week 18 Final report and presentation  
(For the finishing of the course, students have to present the presentation about the chosen plant species for their study group and lecturer, including the evaluation from the lecturer and answers to the questions from the plenum)

學習評量方式

出席狀況 attendance/ participation 15%、  
作業 homework 30%、  
口頭報告 oral presentation 20%、  
書面報告 reports 35%

教科書&參考書目(書名、作者、書局、代理商、說明)

1. Brown, Deni. Encyclopedia of Herbs and Their Uses. New York: Dorling Kindersley Publishing Inc., 1995.
2. Singh, V.B. and Kirti Singh, 2000, Spices, New Age International Publisher, New Delhi.
3. See ESA List of Culinary Herbs and Spices for major, most commonly traded products in the EU:  
<http://www.esa-spices.org/download/esa-list-of-culinary-herbs-and-spices.pdf>.
4. Anonymous. Guidance on Authenticity of Herbs and Spices: Industry Best Practice on Assessing and Protecting Culinary Dried Herbs and Spices. [https://www.fdf.org.uk/corporate\\_pubs/guidance-herbsandspices.pdf](https://www.fdf.org.uk/corporate_pubs/guidance-herbsandspices.pdf).
5. El-Sayed SM and Youssef AM. Potential application of herbs and spices and their effects in functional dairy products. Helion. E01989. <https://www.sciencedirect.com/science/article/pii/S2405844019356142?via%3Dihub>.
6. Martinez Y and Mas D, 2020. Role of Herbs and Medicinal Spices as Modulators of Gut Microbiota. InTech Open. <https://www.intechopen.com/online-first/role-of-herbs-and-medicinal-spices-as-modulators-of-gut-microbiota>.
7. Kaefer CM and Milner JA, 2008. The Role of Herbs and Spices in Cancer Prevention. Journal of Nutritional Biochemistry. 19(6): 347–361. <https://www.sciencedirect.com/science/article/pii/S0955286307002689?via%3Dihub>.

課程教材 (教師個人網址請列在本校內之網址)

課程輔導時間

請尊重智慧財產權，不得非法影印他人著作。

列印日期 西元年/月/日：2020 /  
8 / 14

二手書平台網址：<http://www.myub.com.tw/>