**熱帶農業暨國際合作 系(所) 大學部 課程與核心能力之關聯檢核表**

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.培養生物學技術。  Develop skills in biological theory.  2.具資訊處理編排能力。  Demonstrate information handling and organization.  3.具科學儀器操作技能。  Demonstrate skill in operating scientific equipment. | 1.生物化學(1)  Biochemistry  2.生物化學實習(1)  Biochemistry Lab  3.有機化學  Organic Chemistry  4.有機化學實驗  Organic Chemistry Lab.  5.食品生物化學  Food Biochemistry  6.普通化學(1)  General Chemistry (1)  7.普通化學實習 (1)  General Chemistry Lab. (1)  8.生物化學(2)  Biochemistry  9.生物化學實習(2)  Biochemistry Lab  10.環境資料記錄控制器實作  Environmental data record controller | 筆試及實做測驗  Written and Technical Skills exam. |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 1.團隊合作  Demonstrate team work.  2.具資訊處理編排能力。  Demonstrate ability of handling and organizing information.  3.具公眾演說及學術寫作能力。  Demonstrate skills in public speaking and academic writing. | 1.國際農業發展  International Agriculture Development.  2.校外實習（1）  Practice of industrial training（1）  3.校外實習（2）  Practice of industrial training（2）  4.校外實習（3）  Practice of industrial training（3）.  5.專題討論  Seminar | 1.學生口頭報告  Student Presentations.  2.筆試及口試  Written and Oral Exams. |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 1.團隊合作。  Demonstrate Team work.  2.培養儀器操作技巧。  Develop skills in operating equipment.  3.具國際農業系統了解能力。  Demonstrate understanding of international agriculture systems.  4.具危機思考能力。  Demonstrate critical thinking. | 1.國際農業發展  International Agriculture Development.  2.校外實習（1）  Practice of industrial training（1）  3.校外實習（2）  Practice of industrial training（2）  4.校外實習（3）  Practice of industrial training（3）.  5.專題討論  Seminar | 筆試及口試  Written and Oral Exams. |

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具備基本地理資訊系統相關之能力。  Demonstration of basic knowledge of GIS.  2.具備基本林產製造知識。  Demonstration of basic knowledge of forest products. | 1.地理資訊系統概論  Introduction of GIS  2.林產與木材科學  Forest Products and Wood Science | 進行筆試與實際操作評估  Evaluation by written exam and field exam. |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 具備應用地理資訊系統或林產之專業知能於相關農業生產。  Demonstration of professional ability to apply GIS or forest knowledge in agricultural practice. | 1.地理資訊系統概論  Introduction of GIS  2.林產與木材科學  Forest Products and Wood Science | 進行筆試與實際操作評估  Evaluation by written exam and field exam. |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 以英文上課因此具備參相關之國際合作之語文能力。  Class is taught in English to ensure the language ability in international cooperation project. | 1.地理資訊系統概論  Introduction of GIS  2.林產與木材科學  Forest Products and Wood Science | 以英文進行檢核其學習成效  All evaluations are conducted in English. |

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| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具備農園藝作物量產技術之能力  Demonstration of the ability to mass propagate agricultural and horticultural crops | 1.植物組織培養技術  Plant tissue culture techniques  2.植物組織培養技術實習  Practice of plant tissue culture techniques  3.植物繁殖與保存  Plant Propagation and conservation  4.植物繁殖與保存實習  Practice of Plant Propagation and conservation  5.植物保護學  Plant Protection  6.植物保護學實習  Practice of Plant Protection  7.動植物保護與農業  Animal and Plant Protection and Agriculture  8.植物繁殖技術  Plant Propagation Techniques  9.植物繁殖技術實習  Practice of Plant Propagation Techniques  10. 植物生產系統操作  Plant Production System Operation  11. 溫室管理實習-植物生產  Greenhouse Management Practice - Plant Production | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.田間和實驗室實際操作檢視學生操作技術  Field and laboratory practices to evaluate the technical skills of the students  3.繳交書面報告檢視學生資料蒐集及彙整的能力  Written reports to evaluate students’ ability to collect and analyze data |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 2.具備農園藝作物周年生產的能力  Demonstration of the ability to conduct year-round production of agricultural and horticultural crops | 1.植物組織培養技術  Plant tissue culture techniques  2.植物組織培養技術實習  Practice of plant tissue culture techniques  3.植物繁殖技術  Plant Propagation Techniques  4.植物繁殖技術實習  Practice of Plant Propagation Techniques  5.植物保護學  Plant Protection  6.植物保護學實習  Practice of Plant Protection  7.動植物保護與農業  Animal and Plant Protection and Agriculture  8.養蜂學  Swiftlet Farming  9.養蜂學實習  Practice of Swiftlet Farming  10. 植物生產系統操作  Plant Production System Operation  11. 溫室管理實習-植物生產  Greenhouse Management Practice - Plant Production | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.田間和實驗室實際操作檢視學生操作技術  Field and laboratory practices to evaluate the technical skills of the students  3.繳交書面報告檢視學生資料蒐集及彙整的能力  Written reports to evaluate students’ ability to collect and analyze data |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 1.以英文上課因此具備參相關之國際合作之語文能力。  Class is taught in English to ensure the language ability in international cooperation project. | 1.植物組織培養技術  Plant tissue culture techniques  2.植物組織培養技術實習  Practice of plant tissue culture techniques  3.植物繁殖與保存  Plant Propagation and conservation  4.植物繁殖與保存實習  Practice of Plant Propagation and conservation  5.植物保護學  Plant Protection  6.植物保護學實習  Practice of Plant Protection  7.動植物保護與農業  Animal and Plant Protection and Agriculture  8.養蜂學  Swiftlet Farming  9.養蜂學實習  Practice of Swiftlet Farming |  |

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| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具備特用作物栽培與利用之能力  Demonstration of the ability to cultivate and process special crops  2. 具備植物生理相關知識  Demonstration of the knowledge related to plant physiology | 1.植物生理學  Plant Physiology  2.植物生理學實驗  Plant Physiology Lab.  3.作物學  Field Crops  4.作物學實習  Practice of Field Crops  5.植物學  Botany  6.植物學實習  Practice of Botany  7.食用菌栽培  Cultivation of Edible Fungi  8.食用菌栽培實習  Practice of Cultivation of Edible Fungi | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.現場實際操作檢視學生技術應用之能力  Field and laboratory practices to evaluate the technical skills of the students  3.繳交書面報告檢視學生資  料蒐集及彙整的能力  Written reports to evaluate students’ ability to collect and analyze data |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 1.具開發新特用作物之能力  Demonstration of the ability to explore potential new special crops  2.具植物生理知識屆以發展作物  Demonstrate of the knowledge in plant physiology to produce crops | 1.植物生理學  Plant Physiology  2. 植物生理學實驗  Plant Physiology Lab.  3. 作物學  Field Crops  4. 作物學實習  Practice of Field Crops  5. 植物學  Botany  6. 植物學實習  Practice of Botany  7.食用菌栽培  Cultivation of Edible Fungi  8.食用菌栽培實習  Practice of Cultivation of Edible Fungi | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.現場實際操作檢視學生技術應用之能力  Field and laboratory practices to evaluate the technical skills of the students  3.繳交書面報告檢視學生資  料蒐集及彙整的能力  Written reports to evaluate students’ ability to collect and analyze data |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. |  |  |  |

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| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具庭園景觀設計之能力  Demonstration of the ability to design gardens | 造園學  Landscape architecture  造園學實習  Practice of landscape architecture | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 2.具庭園景觀施工與維護之能力  Demonstration of the ability to construct and maintain gardens | 造園學  Landscape architecture  造園學實習  Practice of landscape architecture | 2.實地操作檢視學生庭園設計與施工之能力  Field practice to evaluate the ability of the students to design and construct gardens. |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. |  |  |  |

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| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.認知世界農糧食作物生產情形、供需概況及未來展望  Knowledge of world crop production, food supply and demand, and the future development  2.認識農業歷史、農藝作物特徵、生育情形、生產方式及生態角色  Understanding the development of agriculture, botany of food crops, crop growth and improvement, and agroecosystems  3.具備栽種一般農藝作物及園藝作物之基本技能  Ability to grow general agronomic and horticultural crops  4.認識各種作物、生產系統及影響作物之環境因子  Knowledge of basic principles of crop science: science of crop plants and soil, development of crop production, and environmental factors affecting crops  5.具備栽種糧食作物之基本技能  Ability to cultivate food crops  6.認識土壤與肥料之基本特性、功能及與作物之關係  Knowledge of soil science and fertilizers, their functions, and relationships with crop plants  7.具備分析土壤物理化學性質及肥料施用之技能  Skills in basic soil analysis and fertilizer application  8.具備植物保護之基本技能  Ability to protect plants  9.具備作物育種之基本技能  Ability to breed crops | 1.農藝園藝概論  Introduction to Agronomy and Horticulture  2.作物學  Field Crops  3.作物學實習  Practice of Field Crops  4.土壤與肥料  Soil and Fertilizer  5.土壤與肥料實習  Practice of Soil and Fertilizer  6.植物保護學  Plant Protection  7.植物保護學實習  Practice of Plant Protection  8.作物育種學  Crop Breeding  9. 作物育種學實習  Practice of Crop Breeding  10. 蔬菜學  Olericulture  11.蔬菜學實習  Practice of Olericulture  12. 花卉學  Floriculture  13. 花卉學實習  Practice of Floriculture  14. 雜草管理  Weed Management  15. 雜草管理實習  Practice of Weed Management  16. 草坪管理  Turf Management  17. 草坪管理實習  Practice of Turf Managemen.t  18. 作物營養學  Crop Nutrition  19. 作物營養學實習  Practice of Crop Nutrition  20. 鄉村社會學  Rural Sociology  21. 果樹學  Pomology  22. 果樹學實習  Practice of Pomology  23. 設施園藝  Horticultural Production Under Structures  24. 設施園藝實習  Practice of Horticultural Production Under Structures  25.農藝園藝概論  Introduction to Agronomy and Horticulture  26熱帶蟲害管理  Tropical Insect Pests Management  27.熱帶農業栽培系統  Agriculture in tropical regions  28. 水土資源與灌溉  Water and Land Resources and Irrigation | 1.課堂答問  A＆Q in the class  2.筆試  Paper test  3.報告  Report  4.實際操作  Practice |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 1.認識作物營養失調症狀、診斷技術、管理原則與改善方法。  Knowledge of nutrient disorder symptoms of crops, analysis technique, managing and improving methods.  2.具備診斷及改善作物營養失調症狀之技能  Ability to identify and improve crop nutrition problems | 1.作物營養學  Crop Nutrition  2.作物營養學實習  Practice of Crop Nutrition  3.植物保護學  Plant Protection  4.植物保護學實習  Practice of Plant Protection  5.作物育種學  Crop Breeding  6.作物育種學實習  Practice of Crop Breeding  7. 蔬菜學  Olericulture  8.蔬菜學實習  Practice of Olericulture  9.花卉學  Floriculture  10.花卉學實習  Practice of Floriculture  11. 雜草管理  Weed Management  12. 雜草管理實習  Practice of Weed Management  13. 草坪管理  Turf Management  14. 草坪管理實習  Practice of Turf Management  16. 造園學  Landscape Architecture  17. 造園學實習  Practice of Landscape Architecture  18. 果樹學  Pomology  19.果樹學實習  Practice of Pomology  20. 設施園藝  Horticultural Production Under Structures  21. 設施園藝實習  Practice of Horticultural Production Under Structures  22.土壤與肥料  Soil and Fertilizer  23.土壤與肥料實習  Practice of Soil and Fertilizer  24熱帶蟲害管理  Tropical Insect Pests Management  25.熱帶農業栽培系統  Agriculture in tropical regions  26.水土資源與灌溉  Water and Land Resources and Irrigation | 1.課堂答問  A＆Q in the class  2.筆試  Paper test  3.報告  Report  4.實際操作  Practice |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 1.具備參與國際合作計畫所需之國際農業發展、農藝園藝概論、作物學、土壤與肥料及作物營養管理與診斷技術等相關知識及分析診斷技能  Ability to contribute tropical agriculture related knowledge and skill at international level | 1.農藝園藝概論  Introduction to Agronomy and Horticulture  2.作物學  Field Crops  3.作物學實習  Practice of Field Crops  4.土壤與肥料  Soil and Fertilizer  5.土壤與肥料實習  Practice of Soil and Fertilizer  6.作物營養學  Crop Nutrition  7.作物營養學實習  Practice of Crop Nutrition  9.花卉學  Floriculture  10.花卉學實習  Practice of Floriculture  11. 果樹學  Pomology  12. 果樹學實習  Practice of Pomology  13. 蔬菜學  Olericulture  14.蔬菜學實習  Practice of Olericulture  16. 雜草管理  Weed Management  17. 雜草管理實習  Practice of Weed  18. 草坪管理  Turf Management  19. 草坪管理實習  Practice of Turf Management  20.作物育種學  Crop Breeding  21.作物育種學實習  Practice of Crop Breeding  22.設施園藝  Horticultural Production Under Structures  23. 設施園藝實習  Practice of Horticultural Production Under Structures | 1.課堂答問  A＆Q in the class  2.筆試  Paper test  3.報告  Report  4.實際操作  Practice |

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具備基本國際經濟暨合作知識  Demonstration of the basic knowledge of international economic and Cooperation  2.具備基本國際農業發展知識  Demonstration of the basic knowledge of international agricultural development  3.具備基本農企業管理知識  Demonstration of the basic knowledge of agricultural business management  4.具備基本農業經濟知識  Demonstration of the basic knowledge of agricultural economics  5.具備基本經營、管理及行銷之知識Demonstration of the basic knowledge of operation, management and marketing | 1.國際經濟暨合作  International Economy and Cooperation  2.農企業管理  Agribusiness Management  3.行銷學  Marketing  4. 農業技術推廣和教育Agricultural technology extension and education  5.永續發展趨勢  Trends in Sustainable Development  6.國際農業現況與參訪  International Agricultural Status and Visits | 1.作業指派及進行筆試檢視學生應具備的基礎知識  Evaluation by homework assignments and comprehensive exam. to ensure students’ ability of comprehension.  2.分組報告並繳交書面報告檢視學生分組報告及彙整相關資料的能力  Evaluation by both oral and written reports to ensure students’ ability of collecting and integrating information. |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 1.具備應用國際經濟的知識於農業生產上。  Demonstration of the ability of applying the knowledge of international economy and cooperation in agricultural practice.  2.具備應用農業政策發展及行銷的知識於農業生產上。  Demonstration of the ability of applying the knowledge of agricultural policy and development, and agricultural marketing in agricultural practice.  3.具備農企業管理及營運的能力。  Demonstration of the ability of applying the knowledge and skills of management and accounting in agricultural practice  4.具備應用經濟學之知識於農業生產上。  Demonstration of the ability of applying the knowledge of economics in agricultural practice.  5.具備應用基本經營、管理及行銷之知識於農業生產上。  Demonstration of the ability of applying the knowledge and skills of marketing in agricultural practice. | 1.國際經濟暨合作  International Economy and Cooperation  2.農企業管理  Agribusiness Management  3.行銷學  Marketing  4.人力資源管理  Human Resource Management  5. 農業技術推廣和教育Agricultural technology extension and education  6.永續發展趨勢  Trends in Sustainable Development  6.國際農業現況與參訪  International Agricultural Status and Visits | 1.作業指派及進行筆試，檢視學生應具備的基礎知識。  Evaluation by homework assignments and comprehensive exam. to ensure students’ ability of comprehension.  2.分組報告並繳交書面報告，檢視學生分組報告及彙整相關資料的能力。  Evaluation by both oral and written reports to ensure students’ ability of collecting and integrating information. |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 1.具備國際市場的經濟的概念，並能相互合作發揮所長的能力  Demonstration of the ability of applying the knowledge of international economy and cooperation to participate in international projects.  2.具備良好的外語溝通、寫作、閱讀的能力  Demonstration of the ability of communication, writing, and reading in English.  3.具備收集國際農業相關資訊，並有解決問題的能力。  Demonstration of the ability of search and integrate international agriculture-related information, and problem-solving skills. | 1.國際經濟暨合作  International Economy and Cooperation  2.農企業管理  Agribusiness Management  3.行銷學  Marketing  4.人力資源管理  Human Resource Management  5.永續發展趨勢  Trends in Sustainable Development  6.國際農業現況與參訪  International Agricultural Status and Visits | 1作業指派及進行筆試檢視學生應具備的基礎知識  Evaluation by homework assignments and comprehensive exam. to ensure students’ ability of comprehension.  2.分組報告並繳交書面報告檢視學生分組報告及彙整相關資料的能力  Evaluation by both oral and written reports to ensure students’ ability of collecting and integrating information. |

**熱帶農業暨國際合作 系(所) 大學部 課程與核心能力之關聯檢核表**

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具備基因知識  With the knowledge of genes  2.具備染色體遺傳分析能力  Able to analyze chromosome genetics  3.具備疾病預防隔離檢疫能力  Able to prevent disease outbreak and quarantine  4.具備養殖場管理相關知識與技能  With ability and knowledge of manage an aquafarm  5.具備禽畜保健與預防傳染病相關知識  Demonstrate to livestock health and transmissible diseases | 遺傳學  Genetics  遺傳學實習  Practice of Genetics  免疫學概論  Introduction to Immunology  分子生物學  Molecular Biology  微生物學  Microbiology  微生物學實習  Practice of Microbiology  養殖場實習  Practice of Aquafarm  水族動物疾病學  Aquatic Animal Diseases  動物飼料學  Animal Feeds and Feeding  禽畜保健與傳染病防治  Livestock Health and Transmissible Diseases  禽畜保健與傳染病防治實習  Practice of Livestock Health and Transmissible Diseases  水產遺傳育種學  Fish Genetics and Breeding  養殖場經營與管理Aquaculture Business Management  世界養殖概論  Introduction to World Aquaculture  水族營養學  Fish Nutrition and Feed  生態蟲害管控技術  Ecological pest management and control technology | 1.進行筆試檢視學生應具備的基本知識  Paper test for the knowledge  2.繳交書面報告檢視學生彙整相關資料能力  Evaluate term paper or final report students submitted |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 1.具備國際養殖現況知能  With the knowledge of current status of international aquaculture  2.具備水生生物繁殖能力、養殖技術與育種能力  With the ability to culture and reproduce  3.具備水質分析能力  With the ability to analyze water quality  4.具備管理及運作養殖場技能  With the skill to manage and running aquafarm  5. 具備禽畜保健與預防傳染病技能  Demonstrate the skills of livestock health and transmissible diseases | 水產養殖學  Introduction to Aquaculture  動物飼料學  Animal Feeds and Feeding  水族營養學  Fish Nutrition and Feed  水產遺傳育種學  Fish Genetics and Breeding  養殖場實習  Practice of Aquafarm  水族動物疾病學  Aquatic Animal Diseases  動物飼料學  Animal Feeds and Feeding  禽畜保健與傳染病防治  Livestock Health and Transmissible Diseases  禽畜保健與傳染病防治實習  Practice of Livestock Health and Transmissible Diseases  水產遺傳育種學  Fish Genetics and Breeding  養殖經營與管理Aquaculture Business Management  水產生物學  Aquatic Biology  生態蟲害管控技術  Ecological pest management and control technology | 1.進行筆試檢視學生應具備的基本知識  Paper test for the knowledge  2.繳交書面報告檢視學生彙整相關資料能力  Evaluate term paper or final report students submitted  3.現場實際操作檢視學生繁養殖技術能力  Evaluate the techniques students learned in field |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 1.具備科學文章閱讀及寫作能力  With the ability to read and write the scientific papers  2. 具備國際市場的經濟的概念，並能相互合作發揮所長的能力  Demonstration of the ability of applying the knowledge of international economy and cooperation to participate in international projects. | 文獻選讀與寫作  Literature Reading and Writing  微生物學  Microbiology  微生物學實習  Practice of  Microbiology  遺傳學  Genetics  遺傳學實習  Practice of Genetics  養殖場實習  Practice of Aquafarm  水族動物疾病學  Aquatic Animal Diseases  禽畜保健與傳染病防治  Livestock Health and Transmissible Diseases  禽畜保健與傳染病防治實習  Practice of Livestock Health and Transmissible Diseases  水產遺傳育種學  Fish Genetics and Breeding  水產養殖學  Introduction to Aquaculture  水族營養學  Fish Nutrition and Feed | 1.進行筆試檢視學生應具備的基本知識  Paper test for the knowledge  1.繳交書面報告檢視學生彙整相關資料能力  Evaluate term paper or final report students submitted |

**熱帶農業暨國際合作 系(所) 大學部 課程與核心能力之關聯檢核表**

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具備生物技術之能力  Demonstration of the ability to apply biotechniques | 1. 生物技術  Biotechnology | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.現場實際操作檢視學生技術應用之能力  Field and laboratory practices to evaluate the technical skills of the students  3.繳交書面報告檢視學生資  料蒐集及彙整的能力  Written reports to evaluate students’ ability to collect and analyze data |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 2.具開發新生物技術之能力  Demonstration of the ability to develop potential new techniques | 1. 生物技術  Biotechnology | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.現場實際操作檢視學生技術應用之能力  Field and laboratory practices to evaluate the technical skills of the students  3.繳交書面報告檢視學生資  料蒐集及彙整的能力  Written reports to evaluate students’ ability to collect and analyze data |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. |  |  |  |

**熱帶農業暨國際合作 系(所) 大學部 課程與核心能力之關聯檢核表**

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具備動物類，家禽類及家畜知識與技能  Demonstration of the ability to have knowledge on animals, poultries and livestocks.  2.具備動物育種相關知識  With the knowledge of animal breeding  3. 具備畜產業加工相關知識  With the basic knowledge in animal processing | 1.動物學  Zoology  2.動物學實習  Practice of Zoology  3.動物科學導論  Introduction to Animal Science  4.動物解剖生理學  5.動物解剖生理學實習  6.牧場實務實習  7.動物舍規劃與自動化  8.動物營養學  9.家禽飼養管理  10.家禽飼養管理實習  11.豬隻飼養管理  12.豬隻飼養管理實習  13.乳用家畜飼養管理  14.乳用家畜飼養管理實習  15.動物育種學  16.乳品加工  17.乳品加工實習  18. 肉品加工  19. 肉品加工實習  20. 動物繁殖學  21. 禽畜環境生理學  22.寵物科學(1)  23.寵物科學(2)  24.養燕學  25.經濟動物飼養管理  Economic Animal Feed Management | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.田間和實驗室實際操作檢視學生操作技術  Field and laboratory practices to evaluate the technical skills of the students  3.繳交書面報告檢視學生資料蒐集及彙整的能力  Written reports to evaluate students’ ability to collect and analyze data |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 1.具備動物類, 家禽類及家畜生產與繁殖的能力  Demonstration of the ability to conduct round production and reproduction of animals and poultries.  2.具備動物育種技能  With the ability of animal breeding  3.具備乳品及肉品加工方面技能  With the ability of dairy processing and meat product  4.具備製造飼料相關技能  With the ability of feed manufacturing | 1.動物學  Zoology  2.動物學實習  Practice of Zoology  3.動物科學導論  Introduction to Animal Science  4.動物解剖生理學  5.動物解剖生理學實習  6.牧場實務實習  7.動物舍規劃與自動化  8.動物營養學  9.家禽飼養管理  10.家禽飼養管理實習  11.豬隻飼養管理  12.豬隻飼養管理實習  13.乳用家畜飼養管理  14.乳用家畜飼養管理實習  15.動物育種學  16.乳品加工  17.乳品加工實習  18. 肉品加工  19.肉品加工實習  20.動物繁殖學  21.飼料製造技術  22.飼料製造技術實習  23.肉品原料與利用  24. 禽畜環境生理學  25.寵物科學(1)  26.寵物科學(2)  27.養燕學  28.經濟動物飼養管理  Economic Animal Feed Management | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.田間和實驗室實際操作檢視學生操作技術  Field and laboratory practices to evaluate the technical skills of the students  3.繳交書面報告檢視學生資料蒐集及彙整的能力  Written reports to evaluate students’ ability to collect and analyze data |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 1.具備參與國際合作計畫所需之動物,家禽類及家畜等相關知識及分析診斷技能  Ability to contribute tropical agriculture related knowledge and skill at international level  2.具備收集國際農業相關資訊，並有解決問題的能力。  Demonstration of the ability of search and integrate international agriculture-related information, and problem-solving skills. | 1.動物解剖生理學  2.動物解剖生理學實習  3.牧場實務實習  4.動物舍規劃與自動化  5.動物營養學  6.家禽飼養管理  7.家禽飼養管理實習  8.豬隻飼養管理  9.豬隻飼養管理實習  10.乳用家畜飼養管理  11.乳用家畜飼養管理實習  12.動物育種學  13.動物繁殖學 |  |

**熱帶農業暨國際合作 系(所) 大學部 課程與核心能力之關聯檢核表**

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1.具備食品科學, 食品加工及食品殺菌的知識。  Demonstrate the ability to food science knowledge  2.具科學儀器操作技能。  Demonstrate skill in operating scientific equipment. | 1.食品科學概論  Introduction of Food Science  2.食品加工與實習  Food Processing and Practice  3. 食品機械  Food Machinery  4.農業自動化概論Introductory Agricultural Automation  5. 農業自動化概論實習Practices of Introductory Agricultural Automation  6.農產品生鮮處理技術  Postharvest Technology of Agricultural Products  7.農產品生鮮處理技術實習  Practice of Postharvest Technology of Agricultural Products  8. 醱酵生產技術與實習  Fermented Food Processing and Practice  9. 農業機械操作  Agricultural machinery operation | 1.進行筆試檢視學生學習成效  Classroom examination to evaluate the learning performance of the students  2.實驗室實際操作檢視學生操作技術  Laboratory practices to evaluate the technical skills of the students |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 1. 具備食品科學技術   Demonstrate the technique on food science   1. 具備食品機械操作技術   With the skill of operating food machinery   1. 具備技能操作生物產業之相關   機械  With ability of operative biological industry’s machinery   1. 具備操作內燃機技術   With the skill to operate internal combustion engine | 1.食品科學概論  Introduction of Food Science  2.食品加工與實習  Food Processing and Practice  3.農產品生鮮處理技術  Postharvest Technology of Agricultural Products  4.農產品生鮮處理技術實習  Practice of Postharvest Technology of Agricultural Products  5.食品機械  Food Machinery  6. 農業機械操作  Agricultural machinery operation  7.農業自動化概論Introductory Agricultural Automation  8. 農業自動化概論實習Practices of Introductory Agricultural Automation  9. 醱酵生產技術與實習  Fermented Food Processing and Practice | 1.學生口頭報告  Student Presentations.  2.筆試及口試  Written and Oral Exams. |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 以英文上課因此具備參相關之國際合作之語文能力。  Class is taught in English to ensure the language ability in international cooperation project. |  |  |

**熱帶農業暨國際合作 系(所) 大學部 課程與核心能力之關聯檢核表**

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. |  |  |  |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 具備第二外語能力  Second language Ability | 1.應用華語（5）  Applied Mandarin (5)  2.應用華語（6）  Applied Mandarin (6)  3.應用華語（7）  Applied Mandarin (7) | 1.學生口頭報告  Student Presentations.  2.筆試及口試  Written and Oral Exams. |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 具備第二外語溝通能力  Communication ability of second language | 1. 英文 (三)  English (3)  2. 英文 (四)  English (4)  3. 英文 (五)  English (5)  4. 英文 (六)  English (6) |  |

**熱帶農業暨國際合作 系(所) 大學部 課程與核心能力之關聯檢核表**

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| **核心能力**  **Core Capabilities** | **能力指標與核心素養**  **Capabilities Index and**  **Core Accomplishment** | **對應課程**  **Related Courses** | **檢核機制**  **Evaluation** |
| 1. 具熱帶國際農業基礎知識與技能。  Demonstration of basic knowledge in international tropical agriculture. | 1. 具備土木測量及流體力學之基本知識   With the knowledge of civil engineering measurement and fluid mechanics   1. 具備水土保持之基本知識   With the basic knowledge of soil and water conservation | 1.測量學  Surveying  2.測量學實習  Surveying Practice  3. 地理資訊系統概論  Introduction of GIS  4. 水土保持概論  Itroduction to Soil and Water Conservation |  |
| 2. 具應用專業知識於農業生產之技能。  Demonstration of the ability to apply professional knowledge in solving agriculture issues. | 1. 具備土木測量及流體力學之操作技能   With the operating skills on civil engineering measurement and fluid mechanics   1. 具備土壤物理性檢測技能   With the ability to detect soil physics   1. 具備電腦製圖能力   With ability to draft by computer   1. 具備渠道水力與排水使用相關技能   With the ability of operating channel hydraulics and drainage   1. 具備水土保持實行技術   Demonstrate of approaching soil and water conservation techniques   1. 具備油氣壓操作技術   With the skill to operate hydraulics and pneumatics | 1.工程力學  Engineering Machanics  2.測量學  Surveying  3.測量學實習  Surveying Practice  4.水文學  Hydrology  5.灌溉學  Irrigation  6.地理資訊系統概論  Introduction of GIS  7.水土保持概論  Itroduction to Soil and Water Conservation |  |
| 3. 具參與國際合作計畫能力。  Demonstration of ability to participate in sustainable agriculture and international cooperation projects. | 以英文上課因此具備參相關之國際合作之語文能力。  Class is taught in English to ensure the language ability in international cooperation project. | 1.水文學  Hydrology  2.水土保持概論  Itroduction to Soil and Water Conservation |  |