**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)Biochemistry2.生物化學實習(1)Biochemistry Lab3.有機化學 Organic Chemistry4.有機化學實驗 Organic Chemistry Lab.5.食品生物化學Food Biochemistry6.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)Biochemistry9.生物化學實習(2)Biochemistry Lab10.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. |

 **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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| 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 GIS2.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 GIS2.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 GIS2.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. |

 **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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| 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 techniques2.植物組織培養技術實習Practice of plant tissue culture techniques3.植物繁殖與保存Plant Propagation and conservation4.植物繁殖與保存實習Practice of Plant Propagation and conservation5.植物保護學Plant Protection6.植物保護學實習Practice of Plant Protection7.動植物保護與農業Animal and Plant Protection and Agriculture8.植物繁殖技術Plant Propagation Techniques9.植物繁殖技術實習Practice of Plant Propagation Techniques10. 植物生產系統操作Plant Production System Operation11. 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 students3.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 techniques2.植物組織培養技術實習Practice of plant tissue culture techniques3.植物繁殖技術Plant Propagation Techniques4.植物繁殖技術實習Practice of Plant Propagation Techniques5.植物保護學Plant Protection6.植物保護學實習Practice of Plant Protection7.動植物保護與農業Animal and Plant Protection and Agriculture8.養蜂學Swiftlet Farming9.養蜂學實習Practice of Swiftlet Farming10. 植物生產系統操作Plant Production System Operation11. 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 students3.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 techniques2.植物組織培養技術實習Practice of plant tissue culture techniques3.植物繁殖與保存Plant Propagation and conservation4.植物繁殖與保存實習Practice of Plant Propagation and conservation5.植物保護學Plant Protection6.植物保護學實習Practice of Plant Protection7.動植物保護與農業Animal and Plant Protection and Agriculture8.養蜂學Swiftlet Farming9.養蜂學實習Practice of Swiftlet Farming |  |

 **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.具備特用作物栽培與利用之能力Demonstration of the ability to cultivate and process special crops2. 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 Physiology2.植物生理學實驗Plant Physiology Lab.3.作物學Field Crops4.作物學實習Practice of Field Crops5.植物學Botany6.植物學實習Practice of Botany7.食用菌栽培Cultivation of Edible Fungi8.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 students2.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 students3.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 crops2.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 Physiology2. 植物生理學實驗Plant Physiology Lab.3. 作物學Field Crops4. 作物學實習Practice of Field Crops5. 植物學Botany6. 植物學實習Practice of Botany7.食用菌栽培Cultivation of Edible Fungi8.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 students2.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 students3.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 development2.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 agroecosystems3.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 crops4.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 crops5.具備栽種糧食作物之基本技能Ability to cultivate food crops6.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 plants7.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 plants9.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 Horticulture2.作物學Field Crops3.作物學實習Practice of Field Crops4.土壤與肥料Soil and Fertilizer5.土壤與肥料實習Practice of Soil and Fertilizer6.植物保護學Plant Protection7.植物保護學實習Practice of Plant Protection 8.作物育種學Crop Breeding9. 作物育種學實習Practice of Crop Breeding10. 蔬菜學Olericulture11.蔬菜學實習Practice of Olericulture12. 花卉學Floriculture13. 花卉學實習Practice of Floriculture14. 雜草管理Weed Management15. 雜草管理實習Practice of Weed Management16. 草坪管理Turf Management17. 草坪管理實習Practice of Turf Managemen.t18. 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 Sociology21. 果樹學Pomology22. 果樹學實習Practice of Pomology23. 設施園藝Horticultural Production Under Structures24. 設施園藝實習Practice of Horticultural Production Under Structures25.農藝園藝概論Introduction to Agronomy and Horticulture26熱帶蟲害管理Tropical Insect Pests Management27.熱帶農業栽培系統Agriculture in tropical regions28. 水土資源與灌溉Water and Land Resources and Irrigation | 1.課堂答問A＆Q in the class2.筆試Paper test3.報告Report4.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 Protection4.植物保護學實習Practice of Plant Protection5.作物育種學Crop Breeding6.作物育種學實習Practice of Crop Breeding7. 蔬菜學Olericulture8.蔬菜學實習Practice of Olericulture9.花卉學Floriculture10.花卉學實習Practice of Floriculture11. 雜草管理Weed Management12. 雜草管理實習Practice of Weed Management13. 草坪管理Turf Management14. 草坪管理實習Practice of Turf Management16. 造園學Landscape Architecture17. 造園學實習Practice of Landscape Architecture18. 果樹學Pomology19.果樹學實習Practice of Pomology20. 設施園藝Horticultural Production Under Structures21. 設施園藝實習Practice of Horticultural Production Under Structures22.土壤與肥料Soil and Fertilizer23.土壤與肥料實習Practice of Soil and Fertilizer24熱帶蟲害管理Tropical Insect Pests Management25.熱帶農業栽培系統Agriculture in tropical regions26.水土資源與灌溉Water and Land Resources and Irrigation | 1.課堂答問 A＆Q in the class2.筆試 Paper test3.報告 Report4.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 Horticulture2.作物學Field Crops3.作物學實習Practice of Field Crops4.土壤與肥料Soil and Fertilizer5.土壤與肥料實習Practice of Soil and Fertilizer6.作物營養學Crop Nutrition 7.作物營養學實習Practice of Crop Nutrition 9.花卉學Floriculture10.花卉學實習Practice of Floriculture11. 果樹學Pomology12. 果樹學實習Practice of Pomology13. 蔬菜學Olericulture14.蔬菜學實習 Practice of Olericulture16. 雜草管理Weed Management17. 雜草管理實習Practice of Weed18. 草坪管理Turf Management19. 草坪管理實習Practice of Turf Management20.作物育種學Crop Breeding21.作物育種學實習Practice of Crop Breeding22.設施園藝Horticultural Production Under Structures23. 設施園藝實習Practice of Horticultural Production Under Structures | 1.課堂答問A＆Q in the class2.筆試Paper test3.報告Report4.實際操作Practice  |

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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.具備基本國際經濟暨合作知識Demonstration of the basic knowledge of international economic and Cooperation2.具備基本國際農業發展知識Demonstration of the basic knowledge of international agricultural development3.具備基本農企業管理知識Demonstration of the basic knowledge of agricultural business management4.具備基本農業經濟知識Demonstration of the basic knowledge of agricultural economics5.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 Cooperation2.農企業管理Agribusiness Management3.行銷學Marketing4. 農業技術推廣和教育Agricultural technology extension and education5.永續發展趨勢Trends in Sustainable Development6.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 practice4.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 Cooperation2.農企業管理Agribusiness Management3.行銷學Marketing4.人力資源管理Human Resource Management5. 農業技術推廣和教育Agricultural technology extension and education6.永續發展趨勢Trends in Sustainable Development6.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 Cooperation2.農企業管理Agribusiness Management3.行銷學Marketing4.人力資源管理Human Resource Management5.永續發展趨勢Trends in Sustainable Development6.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 genes2.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 quarantine4.具備養殖場管理相關知識與技能 With ability and knowledge of manage an aquafarm5.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 knowledge2.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 reproduce3.具備水質分析能力With the ability to analyze water quality4.具備管理及運作養殖場技能With the skill to manage and running aquafarm5. 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 knowledge2.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 submitted3.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 papers2. 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 knowledge1.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 students2.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 students3.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 students2.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 students3.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Zoology2.動物學實習Practice of Zoology3.動物科學導論Introduction to Animal Science4.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 students3.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Zoology2.動物學實習Practice of Zoology3.動物科學導論Introduction to Animal Science4.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 students3.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 level2.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 knowledge2.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 Science2.食品加工與實習Food Processing and Practice 3. 食品機械Food Machinery4.農業自動化概論Introductory Agricultural Automation5. 農業自動化概論實習Practices of Introductory Agricultural Automation6.農產品生鮮處理技術Postharvest Technology of Agricultural Products7.農產品生鮮處理技術實習Practice of Postharvest Technology of Agricultural Products8. 醱酵生產技術與實習Fermented Food Processing and Practice9. 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 science1. 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 machinery1. 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 Science2.食品加工與實習Food Processing and Practice3.農產品生鮮處理技術Postharvest Technology of Agricultural Products4.農產品生鮮處理技術實習Practice of Postharvest Technology of Agricultural Products5.食品機械Food Machinery6. 農業機械操作Agricultural machinery operation7.農業自動化概論Introductory Agricultural Automation8. 農業自動化概論實習Practices of Introductory Agricultural Automation9. 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Surveying2.測量學實習Surveying Practice3. 地理資訊系統概論Introduction of GIS4. 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 mechanics1. 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 drainage1. 具備水土保持實行技術

Demonstrate of approaching soil and water conservation techniques1. 具備油氣壓操作技術

With the skill to operate hydraulics and pneumatics  | 1.工程力學Engineering Machanics2.測量學Surveying3.測量學實習Surveying Practice4.水文學Hydrology5.灌溉學Irrigation6.地理資訊系統概論Introduction of GIS7.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Hydrology2.水土保持概論Itroduction to Soil and Water Conservation |  |