#### 國立東華大學環境學院

#### 103 學年度第1 學期第4次 行政暨課程規劃委員會暨評鑑會議 紀錄

開會時間:104年1月5日(星期一),下午13:30時

地 點:環境學院小會議室(環 A205)

主 持 人:夏院長禹九

出 席:許世璋委員、吳海音委員、梁明煌委員、戴興盛委員、張有和委員、顏君毅委員、楊

懿如委員、孫義方委員、李俊鴻委員

請 假:陳紫娥委員、張文彥委員、曾偉宏委員、潘威諭同學、劉樵同學

列 席:陳興芝助理、夏懿心助理、李莉莉助理

#### 壹、 報告事項:

### 貳、 討論提案:

#### 評鑑提案

提案 1:環境學院自我評鑑委員正取名單與備取名單排序與利益迴避保證書,提請 討論。

說 明:1.校評鑑會議選出評鑑委員 5 位正取名單及 6 位備取名單(附件一)

2.評鑑委員須簽署利益迴避保證書(附件二)

決 議:評鑑委員備取名單原則依備取委員專長領域做遞補。

提案 2:本院實地訪評時間訂定,提請 討論。

說 明:依校評鑑作業時間規劃預訂於 5 月期間各院辦理實地訪評(附件三)

決 議:實地訪視評鑑時間暫預訂為 5 月 21(四)、22(五)日或 28(四)、29(五)日。

課程提案

提案 3:103 學年度第2 學期增開課程案,提請 討論。

說 明:1.人文與環境碩士學位學程「另類發展與傳統生態知識」--李宜澤老師、吳海音老師、 夏禹九老師及謝若蘭老師合開。

2.國際碩士班加開「引導研究(二)」—孫義方老師、張世杰老師、林祥偉老師;「專題討論(一)」--張世杰老師;「自然資源研究方法(一)」--許育誠老師。

3.博士班加開「專題研究(四)」--林祥偉老師;「自然資源與環境研究特論」--林祥 偉老師、李俊鴻老師。

4.碩士班停開「環境學習中心理念與實務」--許世璋老師、「共有資源管理」--戴興 盛老師、「社會調查方法」--李俊鴻老師。

決 議:照案通過。

提案 4:103 學年度第 2 學期學士班課程 TA 申請及全系課程選課人數案,提請 討論。

說 明:1.學士班課程 TA 申請

2.全系課程初選選課人數

決 議:1.有關 TA 申請照案通過,並再提下次課委會做最後確認。

2.通知碩士班課程選課人數不足的授課教師,若該門課為連續兩年人數不足者停開。

提案 5:學士班環境管理與環境教育學程及地球科學程有關課規修訂案(附件四),提請討論。

說 明:環境管理與環境教育學程—

1.學士班原三個專業選修學程中之「專題研究(一)」、「專題研究(二)」移至系核心

學程,且改為必修課程。「專題研究(一)」1學分、「專題研究(二)」2學分。

2.系核心學程刪除「環境經濟學」;新增「環境法規」(大三選修);「環境社會學」移至「環境管理與環境教育事業選修學程」。

#### 地球科學學程—

- 1.學士班「專題研究(一)」、「專題研究(二)」仍維持現狀於專業選修學程中。
- 2.原專業選修學程中之「野外地質考察」移至系核心學程。
- 決 議:1.系核心學程新增「畢業專題(一)」、「畢業專題(二)」,學分數請各組討論後提下次課委會再議。
  - 2.刪除專業選修學程中「學士論文(一)」、「學士論文(二)」;「專題研究(一)」、「專題研究 (二)」仍維持在各專業選修學程中。
  - 3.系核心學程保留「環境經濟學」·新增「環境地質學」、「環境法規」;「環境社會學」移至環境管理與環境教育專業選修學程、「野外地質考察」維持在地球科學專業選修學程。 4.此修正案自 104 學年度開始實施。

#### 提案 6:有關學士班課程相關檢討及規定案,提請 討論。

- 說 明:1.院基礎科目「普通物理」、「普通化學」、「微積分」課程檢討(附件五)
  - 2.院基礎及系核心學程科目建立教師開課機制
  - 3.有關學生申請以外系課程抵免本系課程。(學士班學生賴思妤申請以生科系「植物生理學」 抵免本系生態保育組選修課程「植物生理學」;學士班一年級學生申請以普通化學實驗(二) 抵免普通化學實驗(一);學士班課程抵免是否建立通則?)
  - 4.有關學士班學生若修習本系專業選修學程為第四個學程,可提出申請採記至多兩門非學

程內科目為專業選修學程科目,可採計科目之原則為何?

- 決 議:1.「普通物理」、「普通化學」、「微積分」課綱請系主任與理工學院協助開課系所協調,盡量 量採用本課綱授課。
  - 2.請助理協助整理每位教師開課科目、學分數及授課時數(二學年),於下次課委會前先寄 給課委會委員過目,並提下次課委會再議。
  - 3.學生申請以生科系「植物生理學」抵免本系「植物生理學」照案通過;申請以「普通化學實驗(二)」抵免「普通化學實驗(一)」不予通過,並請導師協助溝通;學士班課程抵免仍以個案送課委會申請辦理。
  - 4.有關學士班學生若修習本系專業選修學程為第四個學程,可提出申請採記至多兩門非學程內科目為專業選修學程科目,可採計科目之原則為:與本系專業科目領域相關者,可於選課前提交課名、開課系所、學分數及課綱等資料送課委會審議。

提案 7: 有關國際碩士班專題討論開課教師及學生期中退選問題案,提請討論。

決 議:1.103 學年度第2 學期國際碩士班專題討論請張世杰老師協助主課。

2.104 學年度起, 碩博士班專題討論課前一學期申請期中停修者, 次一學期修課時總分扣 5分, 並優先報告。

提案 8:國際碩士班新課程「Social-ecological system stewardship and protected area management」課綱(附件六)與 103-2 學期開課事宜,提請 討論。

說 明:1.若決議於 103-2 學期開課·須上簽修正 103 學年度自然資源與環境學系國際碩士班及人 文與環境碩士學位學程課規。 2.103 學年度(含)後自然資源與環境學系國際碩士班課規刪除保護區規劃和經營

( Planning and Management of Protected Areas ) 課程。

決 議:照案通過。修正之103學年度課規如(附件七)

提案 9:自然資源與環境學系碩士班及人文與環境碩士學位學程修業要點之英文字詞部分修正,及

五、學分抵免(二)抵免時間之說明內容釋疑,提請 討論。

說 明:1. 修正後修業要點如(附件八)。

2. 學分抵免時間,碩、博士生該只有入學之初提請學分抵免申請,入學後修習之課程學分

數是否認定為其畢業學分數,似不應稱抵免。原條文內容如後,「(二)申請抵免學分應

於取得學分後次學期(新生為入學後第1學期)選課加退選截止1週前提出,並經環境

學院課程規劃委員會審核。5.2. With the approval of the Council of Academic Affairs

of the College of Environmental Studies, students may apply to substitute credits

in the semester following the course in which the credits were completed. This

application should be made before the add/withdrawal deadline of the following

semester. Students in their first semester of enrollment have the entire semester.

to make this application.  $\Box$ 

決 議:修正後通過,並檢呈103-1學期第2次環境學院「院務會議」。

叁、臨時動議

提案 10:103 學年度第1 學期碩博士班專題討論課前3 名頒給獎學金案,提請 討論。

決議:1.中文A班:翁上倫、陳厚邦、<mark>黃翎</mark>、宋姵諭(備)

5

- 2.中文 B 班:葉奕辰、王鳳儀、鍾昀庭、賴雯祺(備)
- 3.英文 C 班: NICKI,GEOFFREY MICHAEL、JUHARIAH,JUJUK、
  KAEWMUAN,ANUSAEA、ASEMSUMRANKUN,MISS THUNMIT(備)
- 4.博士生:本地生沈嘉玲、鄭舜仁。外籍生 MCRAE,CRYSTAL JANE、CHAIWONG,
  JINTANA(備)
  - 5.葉奕辰、黃翎 2 位同學因已申請學位口試如本學期即畢業;外籍生 MCRAE,CRYSTAL JANE 因請育嬰假,故 103-2 學期辦理休學。此 3 位同學將上簽呈提請校方同意以計畫回流管理費支付獎學金,但如校方不同意回流管理費使用,則由備取同學遞補。
- 提案 11:「高級中等學校地球科學科師培學程」中尚缺「大氣科學概論」與「天文學」課程,建議 將此 2 門課加入本系「地球科學專業選修學程」,提請 討論。
- 說明:1.「天文學」由課程系蔣佳玲老師支援開設。
  - 2.「大氣科學概論」由張成華老師與張世杰老師開設,其中 4 個星期課程由系上聘請花蓮氣 象站陳世嵐主任講授氣象觀測。
- 決議:1.有條件同意課程開設至「地球科學專業選修學程」,但請再評估是否會有倒課情況發生。 2.聘請系外之專家學者授課,可採演講方式,並協調由研究計畫經費支付。

肆、散會 16:40

# 實審評鑑委員人數為 5 位

| 姓名  | 單位/職稱               | 專長                                                            | 經歷                                                  | 評鑑相關經驗                 | 指導委員勾選 |
|-----|---------------------|---------------------------------------------------------------|-----------------------------------------------------|------------------------|--------|
| 李通藝 | 師範大學地科所特聘<br>教授     | 地體動力學/層序地層<br>學                                               | 師範大學地科所所長/研發長                                       | 評鑑人才資料庫                | 正取     |
| 金恆鑣 | 森林學家、作家、翻譯家         | 森林土壤學/森林生態                                                    | 行政院農業委員會林業試驗所所長                                     | □有(說明: )<br>□無<br>■不確定 | 正取     |
| 張子超 | 台師大環境教育研究所教授        | 環境價值觀與環境典<br>範轉移/環境教育與教<br>育改革〈九年一貫課<br>程〉/永續發展的理念<br>內涵與課程發展 | 中華民國環境教育學會秘書長/中華民國環境教育學會理事                          | □有(說明: )<br>□無<br>■不確定 | 正取     |
| 王鑫  | 中國文化大學地學研<br>究所專任教授 | 地形學/地景保育/景<br>觀研究                                             | 工業技術研究院礦業研究所研究員/臺灣大學地理環境資源學系教授/中國文<br>化大學地學研究所所長    | □有(說明: )<br>□無<br>■不確定 | 正取     |
| 李羅權 | 中央研究院地球科學研究所所長      | 太空物理/地球物理學                                                    | 中華民國國家太空中心主任/國家實驗<br>研究院院長/國立中央大學校長/國家科<br>學委員會主任委員 | □有(說明: )<br>□無<br>■不確定 | 正取     |
| 郭耀綸 | 國立屏東科技大學森 林系教授      | 育林學/森林生態學/<br>林木生態生理學                                         | 國科會台灣長期生態研究網總召集人/<br>屏東科技大學生物多樣性研究中心主任              | 評鑑人才資料庫                | 備取     |

103/10/08 修

| 姓名  | 單位/職稱                 | 專長                                                 | 經歷                                                             | 評鑑相關經驗                 | 指導委員勾選 |
|-----|-----------------------|----------------------------------------------------|----------------------------------------------------------------|------------------------|--------|
| 裴家騏 | 國立屏東科技大學野生動物保育研究所教授   | 野生動物族群生態學<br>與經營管理/哺乳動物<br>學/保育人文學                 | 野生動物保育匯報及通訊/行政院農業<br>委員會野生動物保育諮詢委員會/世界<br>自然保育聯盟物種存續委員會        | □有(說明: )<br>□無<br>■不確定 | 備取     |
| 王乾盈 | 中央大學地科院地球<br>科學學系教    | 地震學/震波測勘學/<br>震波傳遞                                 | 中央大學地科院地球科學學系教                                                 | □有(說明: )<br>□無<br>■不確定 | 備取     |
| 陳吉仲 | 國立中興大學應用經濟系特聘教授兼主任 秘書 | 氣候變遷之經濟分析/<br>資源與環境經濟學/國<br>際農產貿易/農業部門<br>模型的應用與分析 | 農業經濟叢刊(TSSCI)主編/台灣經濟政<br>策與預測社會成本效益分析特刊執行<br>編輯/國立中興大學應用經濟系副教授 | □有(說明: )<br>□無<br>■不確定 | ■備取    |
| 顧洋  | 國立臺灣科技大學化 學工程系教授      | 高級氧化還原程序/化學迴圈程序                                    | 環保署顧問/環境影響評估/環境品質/<br>環保標章/溫室氣體減量指導委員會委<br>員                   | □有(說明: )<br>□無<br>■不確定 | 備取     |
| 林俊全 | 國立台灣大學地理環境資源學系教授      | 地形災害/地景保育/環境影響評估/環境災害調查/國土監測/國土調查                  | 國立台灣大學地理環境資源學系教授兼系主任                                           | □有(說明: )<br>□無<br>■不確定 | ■備取    |

8

※院諮詢委員名單:**蕭代基、林能暉、張長義、周儒、陳正宏、李玲玲(**院諮詢委員不再列入實審評鑑委員)

103/10/08 修

# 國立東華大學自我評鑑委員利益迴避保證書

本人同意擔任國立東華大學 環境學院暨自然資源與環境學系外部評 鑑委員,並保證與受評大學校院間,未曾出現下列任一類可能之利益 關係:

- (一) 過去三年曾任本校專、兼任職務。
- (二) 過去三年內曾申請本校之專任教職。
- (三)配偶或直系三親等為本校之教職員生。
- (四) 擔任本校有給或無給職之職務且有利害關係者。
- (五) 過去三年內與本校有任何形式之商業利益往來。
- (六) 最高學歷為本校畢業者。
- (七)曾接受本校頒贈榮譽學位者。
- (八) 擔任預審階段之外部評鑑委員。

| 簽? | 署ノ | 1 | : |  |
|----|----|---|---|--|
|    |    |   |   |  |

中華民國 年 月 日



# (103學年度東華大學院、系、所)評鑑作業時程規劃如下表,確切時程研發處將另行通知。

| 日期(如有異動・將另行通知)        | 辦理事項                                                                                                                                                                                                                                                                         |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 103.12.01             | 召開自我評鑑指導委員會議、勾選及通過實審評鑑委員名單。                                                                                                                                                                                                                                                  |
| 103.12.17             | 召開本學期自我評鑑執行委員會第3次會議·確認各受評單位實審評鑑委員聯繫名單。                                                                                                                                                                                                                                       |
| 103.12月~104.1月        | <ul> <li>● 各院規劃實審訪評日期與行程,訪評日期確認後,請隨時通知研發處。</li> <li>※已知花師教育學院實審訪評日期為5/11~5/12         人社院5/7~5/8(社會、歷史),5/13~5/14(其餘系所)</li> <li>● 各院系進行實審委員聯繫及確認事宜,並再次檢核委員之現職機構及職稱,以利後續聘書製發事宜。</li> </ul>                                                                                   |
| 104.1月底前              | <ul> <li>● 各院彙整確認後實審委員名單送研發處。</li> <li>● 各院彙整所屬評鑑法規(含院細則及系要點)電子檔至研發處,俾憑送校自我評鑑指導委員會認可後實施。</li> <li>※各院評鑑法規(含院細則及系要點)於103年7月9日併同校院計畫書報部,並於103年9月16日獲教育部認定通過,後續仍有部分院系進行法規修訂或補提院系務會議追認。不論法規是否修正,均請各院於104年1月底前彙整所屬評鑑法規電子檔(如有修正,請同時提供修正後法規及修正條文對照表),俾憑傳送自我評鑑指導委員會認可後實施。</li> </ul> |
| 104.2月~3月             | <ul><li>● 研發處彙整全校實審評鑑委員名單簽請校長核定。</li><li>● 實審委員名單經校長核定,送人事室製發聘書。</li></ul>                                                                                                                                                                                                   |
| 104.4月期間 (實地訪評日期前一個月) | 系所寄送「自我評鑑報告書」至評鑑委員                                                                                                                                                                                                                                                           |
| 104.5月期間              | <ul><li>各院辦理實地訪評</li><li>各院彙整所屬受評單位自我評鑑報告書(含紙本1份及電子檔)及評鑑委員利益迴避保證書影本送研發處</li></ul>                                                                                                                                                                                            |

| 日期(如有異動・將另行通知)     | 辦理事項                                                                                                                                                                                     |  |  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 104.6月~7月          | <ul> <li>評鑑委員應於實地訪評結束兩週內,完成撰寫實地訪評報告書,並提出具體建議及認可結果送回本校。</li> <li>受評單位收到實地訪評報告書後,若認為有程序或事實不符情事者,得在兩週內提出申復申請。</li> <li>評鑑委員應於一個月內針對申復申請進行審議,並決議最終認可結果。</li> <li>各院彙整受評單位認可結果送研發處</li> </ul> |  |  |
| (待確認)              | 各院繳交院自我評鑑結果報告(10頁)                                                                                                                                                                       |  |  |
| 104年8月底前<br>(待確認)  | 召開「自我評鑑指導委員會議」,認定「各受評單位認可結果」。                                                                                                                                                            |  |  |
| 前述工作完成後辦理<br>(待確認) | 本校自我評鑑結果報部認定。                                                                                                                                                                            |  |  |

# 國 立 東 華 大 學

# 自然資源與環境學系

# 103 學年度學士班課程規劃表

- 一、本系學士班學生須滿足通識相關規定及修滿四個學程,學分達 128.0 學分以上方得畢業
- 二、本系學士班主修學程(major),包含下列各項:
  - 1.基礎學程(27.0 學分)
  - 2.核心學程(21.0 學分)
- 三、本系學士班專業選修學程:
  - 1.生態與保育學程(21.0學分)
  - 2.環境管理與環境教育學程(21.0 學分)
  - 3.地球科學學程(21.0 學分)
- 四、通識 43.0 學分(含體育)

| 口 远城 45.0 千万(召腹月)  | 1    | į. |               |                      |
|--------------------|------|----|---------------|----------------------|
| 一、基礎學程             | 科目代碼 | 學分 | 先修科目(修課年級)    | 備註                   |
| 微積分                |      | 3  | 一上            | 應數系支援                |
| 普通化學               |      | 3  | 一上            | 化學系支援                |
| 普通化學實驗             |      | 1  | 一上            | 化學系支援                |
| 普通物理               |      | 3  | 一下            | 物理系支援                |
| 普通物理實驗             |      | 1  | 一上            | 物理系支援                |
| 普通生物學(一)           |      | 3  | 一下            |                      |
| 普通生物學實驗            |      | 1  | 一下            |                      |
| 環境科學概論             |      | 3  | 一上            |                      |
| 生態學                |      | 3  | 二上            |                      |
| 地球科學概論             |      | 3  | 一下            |                      |
| 社會科學概論             |      | 3  | 一上            |                      |
| 二、核心學程             |      |    |               |                      |
| 自然地理學              |      | 3  | 二上            |                      |
| 環境化學               |      | 3  | 二下            |                      |
| 1 11 M 14 11 1m 14 |      |    | _             | 東臺灣生態文化學程            |
| 生物多樣性概論            |      | 3  | 一下            | 課程                   |
|                    |      | 3  | 三上            |                      |
|                    |      |    |               | <del>移至環境管理與環境</del> |
| 環境社會學              |      | 3  | <del>二上</del> | 教育學程                 |
| <br>  環境經濟學        |      | 3  | 二下            | 保留                   |
| 環境倫理               |      | 3  | 二下            | N H                  |
| 環境法規               |      | 3  | 三年級           | 新增                   |
| 環境地質學              |      | 3  | 二上            | 新增                   |
| 地理資訊系統概論           |      | 3  |               | 기사 / 구입              |
|                    |      |    | 二上            |                      |
| 統計學                |      | 3  | 二下            |                      |

| 畢業專題(一)            |      |    |      | 新增                           |
|--------------------|------|----|------|------------------------------|
| 畢業專題(二)            |      |    |      | 新增                           |
| 三、專業選修學程           | 科目代碼 | 學分 | 先修科目 | 備註                           |
| 1.生態與保育學程          |      |    |      |                              |
| 植物形態與分類            |      | 3  | 二上   |                              |
| 動物形態與分類            |      | 3  | 二下   |                              |
| 保育生物學              |      | 3  | 四上   | (1)(2)學程共同科目、東臺灣<br>生態文化學程課程 |
| 環境影響評估             |      | 3  | 四下   | (1)(2)學程共同科目                 |
| 空間分析               |      | 3  | 三下   | (1)(3)學程共同科目                 |
| 熱带生態學與實習           |      | 4  | 三下   |                              |
| 動植物交互關係            |      | 3  | 三下   |                              |
| 生態田野調查             |      | 3  | 二下   |                              |
| 普通生物學(二)           |      | 3  | 二上   |                              |
| 水域生態學              |      | 3  | 三上   |                              |
| 專題研究(一)            |      | 1  | 三上   | 生態組必修                        |
| 專題研究(二)            |      | 1  | 三下   | 生態組必修,先修專題 研究一               |
| <del>學士論文(一)</del> |      | 0  | 四上   | 刪除                           |
| 學士論文(二)            |      | 2  | 四下   | 刪除                           |
| 2.環境管理與環境教育學程      |      |    |      |                              |
| 生態旅遊               |      | 3  | 二下   | 東臺灣生態文化學程<br>課程              |
| 社會科學研究法            |      | 3  | 三上   |                              |
| 環境教育               |      | 3  | 三上   | 東臺灣生態文化學程<br>課程課程            |
| 環境教育教材教法           |      | 3  | 三下   |                              |
| 社區創意產業與專案計畫寫作      |      | 3  | 四上   |                              |
| 環境解說               |      | 3  | 四上   |                              |
| 保育生物學              |      | 3  | 四上   | (1)(2)學程共同科目、東臺灣<br>生態文化學程課程 |
| 水資源管理              |      | 3  | 四下   |                              |
| 環境影響評估             |      | 3  | 四下   | (1)(2)學程共同科目                 |
| 環境社會學              |      | 3  | 二上   |                              |
| 專題研究(一)            |      | 1  | 三上   |                              |
| 專題研究(二)            |      | 1  | 三下   |                              |

| 學士論文(一)  | 0     | 四上 | 刪除           |
|----------|-------|----|--------------|
| 學士論文(二)  | 2     | 四下 | 刪除           |
| 3.地球科學學程 |       |    |              |
| 普通地質學    | 3     | 二上 |              |
| 岩石學      | 3     | 三上 |              |
| 地形學      | 3     | 三上 |              |
| 構造地質學    | 3     | 三下 |              |
| 空間分析     | 3     | 三下 | (1)(3)學程共同科目 |
| 野外地質考察   | 3     | 二上 | 保留           |
| 地球物質     | 3     | 二下 |              |
| 遙感探測學    | 3     | 二下 |              |
| 地球物理學    | 3     | 三上 |              |
| 海洋學      | 3     | 三下 |              |
| 專題研究(一)  | 1     | 三上 |              |
| 專題研究(二)  | 1     | 三下 | 先修專題研究一      |
| 學士論文(一)  | <br>0 | 四上 | 刪除           |
| 學士論文(二)  | <br>2 | 四下 | 刪除           |

#### 四、重要相關規定:

- 1. 本系學士班學生須滿足通識相關規定及修滿四個學程,學分達 128 學分以上方得畢業(即修滿主修領域(major)加一個副修學程(minor),或加一個本系專業選修學程,連同通識學分,總計修習學分數達 128 以上)。
- 2. 學生若修習本系專業選修學程為第四個學程,可由學生提出申請,採記至多兩門非學程內科目為專業選修學程科目,並須檢附歷年成績單送院課程委員會審議通過後始得抵認。(追溯至102 學年度前入學之學生皆適用)
- 3. 本系學士班學生,除修畢英語必修 6 學分外,需通過英語能力檢測:托福 iBT 測驗 61 分以上(紙 筆托福 TOEFL ITP 500 分以上)/多益(TOEIC) 600 分以上/全民英檢(GEPT)中級複試或中高級初試 以上/其他相對應之校內外英語能力檢定測驗,始達本校英語能力畢業標準。通過檢測之學生,須 持成績證明至語言中心登錄。未通過者需加修 2 門通識英語必修或選修課 4~6 學分;此加修 4~6 學分亦可採計各院系所規劃且語言中心認可之全英語授課課程 (請參考語言中心公告),惟加修之學分不計入通識語文領域 12 學分內,但會列入畢業總學分。學生於入學前二年內或修課期間,通過檢定測驗,原英語必修學群 6 學分,可採用英語必修學群或語文選修學群學分認列。
- 4. 本系學士班學生每學期最低修習學分數為 0 學分,每學期修習學分數最高為 24 學分。
- 5. 本系學士班學生須修畢「服務學習(一)」、「服務學習(二)」,全部通過者,始得畢業。
- 6. 除主修及選修學程外,剩餘學分(至少 15.0 學分)可選修跨院學程、本系第二專業選修學程,上修本院碩士班課程,或是選修外系課程取得副修或雙主修學位。
- 7. 凡科目需修習上下兩部方完整者,為全學年修習之科目,本系全學年修習之科目,若僅修讀一學 期或僅有一學期之成績者,仍可計入畢業學分。

- 8. 選修生態保育組專業學程之同學,專題研究(一)(二)為必修,限三年級以上學生選修。
- 9. 可採計為生態與保育專業選修學程學分之碩士班課程:生態統計學、植物系統分類學、民族植物學、昆蟲學、兩棲生物學、鳥類生物學、植物生態學、魚類生態學、行為生態學、植物群落生態學、地景生態學、生態系生態學、遺傳學、動物生理學、植物生理學。
- 10. 可採計為環境管理與環境教育專業選修學程學分之碩士班課程:環境管理專題、環境治理專題。 大四生選修可認列:自然保育行政與衝突管理、資源再生管理與策略、 共有資源管理、土地資源評估、環境議題教學、應用統計分析方法。大三生、大四生可認列:環境風險評估與管理專論、鄉村規劃、生態社區、生態式--休閒農業規劃、環境溝通與社區保育、生物多樣性保育教育、環境復育專題、國家公園管理議題分析、遊憩衝擊、地景調查與地圖製作、全球變遷教育專題、自然保護區經營。
- 11. 可採計為地球科學組專業選修學程學分之碩士班課程:環境地學專題、空間分析專題、土地資源評估、地球化學專題、地震防災專題與構造地形學。
- 12.99 及 100 學年度課規中,已修畢「植物形態學」與「植物分類學」者,可認抵 101 學年度「植物形態與分類」;修畢「無脊椎動物學」與「脊椎動物學」者,可認抵「動物形態與分類」。若前述 99 及 100 學年度課規中之兩科目僅修畢一科,可列入畢業學分,但無法抵認 101 學年度之專業選修學程科目。
- 13. 學士班 99 學年度以後入學之學生,若選修 101 學年度課規中之課程,可採計為專業選修學程學分。
- 14. 自 103 學年度起,持「海外中五生」學制畢業生,以同等學力資格入學大學學士班者,畢業學分數應達至少 140 學分,並以本系開設之課程為限。
- 15. 本系學碩士中文班學生修習本院系英語授課班別之課程,皆可採計為畢業學分。



# 課 綱 Course Outline

#### 環境學院學士班

| 中文課程名稱<br>Course Name in Chinese | 普通物理            |           |            |         |     |
|----------------------------------|-----------------|-----------|------------|---------|-----|
| 英文課程名稱<br>Course Name in English | General Physics |           |            |         |     |
| 科目代碼                             | DIIV.C11000     | 班別        |            | 學士班     |     |
| Course Code                      | PHYS11000       | Degree    | Bachelor's |         |     |
| 修別                               | 學程              | 學分數       | 3.0        | 時數      | 3.0 |
| Type                             | Program         | Credit(s) | 3.0        | Hour(s) | 3.0 |
| 先修課程<br>Prerequisite             |                 |           |            |         |     |

#### 課程目標

#### **Course Objectives**

環境學院普通物理學的課程目標,是讓學生在高中物理學的基礎上,學習環境科學相關的基礎物理學知識。修習本課程之後,學生將能具備修習本院系核心課程及專業學程所需的入門物理學基礎。

#### 院教育目標

#### **College's Education Objectives**

培養兼具國際視野與本土關懷的學生

- To develop students who care about local issues and have an international perspective
- 培養具備自然科學與社會科學知識的人才
  - To educate students to have knowledge of both the natural and social sciences

培養具備環境倫理與人文素養的環境公民

To teach students to be environmental citizens (i.e., knowledgeable about environmental ethics and human issues.).

|   | 院基本素養與核心能力<br>College Basic Learning Outcomes                         | 課程目標與院基本素養<br>與核心能力<br>Correlation between<br>Course Objectives and<br>Basic Learning<br>Outcomes |
|---|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
|   | 具備自然科學與社會科學的基礎知識                                                      |                                                                                                   |
| A | To be knowledgeable of fundamental theories in the natural and social | •                                                                                                 |
|   | sciences.                                                             |                                                                                                   |
|   | 具備觀察、理解、闡釋自然環境與人類社會互動及變遷關係的能力                                         |                                                                                                   |

| В | To be able to observe, understand, and interpret the changing interactions of natural resources and human society.                                        | • |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|   | 具備多元資料收集策略、閱讀論文、撰寫環境報導及創意口頭報告的                                                                                                                            |   |
|   | 能力                                                                                                                                                        |   |
| С | To have the ability to collect data, understand scientific literature, and write and present environmentally related reports.                             | • |
|   | 能終身學習、對環境維持熱情、關懷、並願意做出對在地環境獻身的<br>承諾                                                                                                                      |   |
| D | To cultivate the values of lifelong learning, to maintain enthusiasm and concern for the environment, and to develop commitment to the local environment. | Ο |
|   | 具備環境倫理觀、社會責任感與社會實踐力                                                                                                                                       |   |
| Е | To develop and implement environmental ethics and social responsibility.                                                                                  | 0 |
|   | 具備獨立思考、溝通協調與團隊合作的能力                                                                                                                                       |   |
| F | To think independently, to communicate effectively, and to cooperate with                                                                                 | • |
|   | others as a team.                                                                                                                                         |   |
| G | 具備基本外國語文能力                                                                                                                                                | • |
|   | To be able to communicate in a foreign language.                                                                                                          |   |

圖示說明 Illustration : ● 高度相關 Highly correlated ○中度相關 Moderately correlated

#### 課程大綱

#### **Course Outline**

- 1. Measurement
- 2. Motion
- 3. Vectors
- 4. Force
- 5. Kinetic energy and work
- 6. Potential energy and conservation of energy
- 7. Center of mass and linear momentum
- 8. Rotation
- 9. Rolling, torque, and angular momentum
- 10. Gravitation
- 11. Temperature, heat
- 12. The kinetic theory of gases
- 13. Thermodynamics
- 14. Electromagnetic waves
- 15. Images, interference, diffraction

#### 資源需求評估(師資專長之聘任、儀器設備的配合・・・等)

Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

電腦,多媒體器材

#### 課程要求和教學方式之建議

**Course Requirements and Suggested Teaching Methods** 

課程要求:閱讀教科書與指定讀物,參與課中討論,參與分組實作;教學進行方式:教師講授,分組實作

其他 Miscellaneous

Miscellaneous

規劃負責老師:

單位主管:

系課程委員會審議通過日期:

#### 普通物理與環境學院大學部課程關係

物理學單元參考自 Halliday, Resnick, Walker (2011) Fundamentals of Physics

#### ■ Chapter 1: Measurement

所有與觀察、測量、數據有關的自然社會科學課程

#### ■ Chapter 2-8: Motion, Force, Kinetic energy, Potential Energy, Work, Momentum

系核心:自然地理學

生態與保育學程: 水域生態學、生態田野調查

<u>地球科學學程</u>:普通地質學、野外地質考察、地形學、地球物理學、構造地質學、海洋學、

# ■ Chapter 9-11, 13: Center of mass and linear momentum, Rotation, Rolling, Torque, Angular momentum, Gravitation

系核心:自然地理學

地球科學學程:地形學、地球物理學、構造地質學,遙感探測學、空間分析、土地利用

#### ■ Chapter 18-20: Temperature, heat, thermodynamics

<u>系核心</u>:自然地理學、環境化學

生態與保育學程:普通生物學(二)、水域生態學、生態田野調查、熱帶生態學與實習、

動植物交互關係、保育生物學

地球科學學程:應該都有關係

#### ■ Chapter 33-36: Electromagnetic waves, Images, Interference, Diffraction

系核心:自然地理學、環境化學

<u>生態與保育學程</u>:水域生態學、生態田野調查、熱帶生態學與實習、動植物交互關係、保育生物學

地球科學學程:野外地質考察、遙感探測學、地形學、空間分析、海洋學、土地利用



HALLIDAY & RESNICK

# FUNDAMENTALS OF PHYSICS

Jearl Walker

Cleveland State University



John Wiley & Sons, Inc.

#### Volume 1

#### PART 1

- 1 Measurement
- 2 Motion Along a Straight Line
- 3 Vectors
- 4 Motion in Two and Three Dimensions
- 5 Force and Motion I
- 6 Force and Motion II
- 7 Kinetic Energy and Work
- 8 Potential Energy and Conservation of Energy
- 9 Center of Mass and Linear Momentum
- 10 Rotation
- 11 Rolling, Torque, and Angular Momentum

#### PART 2

- 12 Equilibrium and Elasticity
- 13 Gravitation
- 14 Fluids
- 15 Oscillations
- 16 Waves I
- 17 Waves II
- 18 Temperature, Heat, and the First Law of Thermodynamics
- 19 The Kinetic Theory of Gases
- 20 Entropy and the Second Law of Thermodynamics

#### Volume 2

#### PART 3

- 21 Electric Charge
- 22 Electric Fields
- 23 Gauss' Law
- 24 Electric Potential
- 25 Capacitance
- 26 Current and Resistance
- 27 Circuits
- **28** Magnetic Fields
- 29 Magnetic Fields Due to Currents
- 30 Induction and Inductance
- 31 Electromagnetic Oscillations and Alternating Current
- 32 Maxwell's Equations; Magnetism of Matter

### PART 4

- 33 Electromagnetic Waves
- 34 Images
- 35 Interference
- **36** Diffraction
- **37** Relativity

### PART 5

- 38 Photons and Matter Waves
- 39 More About Matter Waves
- 40 All About Atoms
- 41 Conduction of Electricity in Solids
- **42** Nuclear Physics
- 43 Energy from the Nucleus
- 44 Quarks, Leptons, and the Big Bang

# 東華大學 自資系 ~ 普週化學

我參考黃淑絹老師的教科書與課網,這本書的內容簡單易懂,黃老師目前規劃內容主要在第一章~第九章,確實都能達到化學基礎訓練的需求,個人對個章節中可加強部分提出下表建議,或許 Ch5~CH6 建議簡單介紹觀念即可,但仍以尊重授課老師考慮授課完整性為前提。而 CH11~CH16 對未來環境議題有其重要性,建請綜合考慮整體時間規劃範圍內可優先安排基礎的 CH14~CH16 部分內容,因為學期時間有限,最後若有空再回來講精簡 CH11-13 的建議小節。

TText book: Chemistry, by Steven S. Zumdhal and Susan A. Zumdahl ,  $9^{\text{th}}$  Edition Table of Contents

|                                                   | Suggestions                   |
|---------------------------------------------------|-------------------------------|
| 1. Chemical Foundations.                          | Briefly overview              |
| 2. Atoms, Molecules, and Ions.                    | 2.5~2.7, 重要化學基礎訓練             |
| 3. Stoichiometry.                                 | 重要化學基礎訓練                      |
| 4. Types of Chemical Reactions and Solution       | 重要化學基礎訓練                      |
| Stoichiometry.                                    |                               |
| 5. Gases                                          | Briefly <b>(</b> 可簡化 <b>)</b> |
| 6. Thermochemistry.                               | Briefly (可簡化)                 |
| 7. Atomic Structure and Periodicity.              | 重要化學基礎訓練,可稍微精簡                |
| 8. Bonding: General Concepts.                     | 重要化學基礎訓練,可稍微精簡                |
| 9. Covalent Bonding: Orbitals.                    | 重要化學基礎訓練,可稍微精簡                |
| 10. Liquids and Solids.                           | 10.1~10.3                     |
|                                                   | 重要化學基礎訓練,可稍微精簡                |
| 11. Properties of Solutions.                      | 11.1~11.3                     |
|                                                   | 若有足夠時間請安排                     |
| 12. Chemical Kinetics.                            | 12.2~12.4                     |
|                                                   | 若有足夠時間請安排                     |
| 13. Chemical Equilibrium.                         | 13.1~13.6                     |
|                                                   | 若有足夠時間請安排                     |
| 14. Acids and Bases.                              | 14.1~14.6, 14.11~14.12        |
|                                                   | 重要環境化學基礎訓練,可優先安排              |
| 15. Acid-Base Equilibria.                         | 重要環境化學基礎訓練,可優先安排              |
| 16. Solubility and Complex Ion Equilibria.        | 重要環境化學基礎訓練,可優先安排              |
| 17. Spontaneity, Entropy, and Free Energy.        | 無需納入課綱                        |
| 18. Electrochemistry.                             | 無需納入課綱                        |
| 19. The Nucleus: A Chemist's View.                | 無需納入課綱                        |
| 20. The Representative Elements.                  | 無需納入課綱                        |
| 21. Transition Metals and Coordination Chemistry. | 無需納入課綱                        |
| 22. Organic and Biological Molecules.             | 無需納入課綱                        |

# ②图玄東華大學

課 網 Course Outline (學士班)

| 中文課程名稱<br>Course Name in Chinese                                                               | 微積分                                                                     |              |                                                          |                                                                                                                                                                                                                         |                  |         |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------|
| 英文課程名稱                                                                                         |                                                                         |              |                                                          |                                                                                                                                                                                                                         |                  |         |
| Course Name in English                                                                         |                                                                         |              |                                                          |                                                                                                                                                                                                                         |                  |         |
| 科目代碼                                                                                           | 班                                                                       | 別            | ■學士班 Bachel                                              | or's □碩 ፤                                                                                                                                                                                                               |                  | program |
| Course Code                                                                                    | De                                                                      |              | □碩士班 Master                                              |                                                                                                                                                                                                                         |                  |         |
| 修別<br>Type                                                                                     | □必修 Required ■選修 Elective □學程 Program                                   |              | 學分數<br>Credit(s)                                         | 3                                                                                                                                                                                                                       | 時 數<br>Hour(s)   | 3       |
| 先修課程<br>Prerequisite                                                                           |                                                                         |              | 無                                                        |                                                                                                                                                                                                                         |                  |         |
| 課程目標<br>Course Objectives                                                                      |                                                                         |              |                                                          |                                                                                                                                                                                                                         |                  |         |
| 系教育目標<br>Dept.'s Education Objectives                                                          | 培養兼具國際初本土關懷的學生                                                          |              | 早 培養具備自然和<br>社會科學知識的                                     |                                                                                                                                                                                                                         | 涪養具備環境<br>人文素養的環 |         |
| 課程目標與系教育目標<br>相關性 Correlation between<br>Course Objectives and Dept.'s<br>Education Objectives | •                                                                       |              | •                                                        |                                                                                                                                                                                                                         | •                |         |
| 圖示說明 Illustration :                                                                            | ● 高度相關 Hig                                                              | hly co       | orrelated 〇中度木                                           | 泪關 Mod                                                                                                                                                                                                                  | erately correla  | ated    |
| 系專業(基本)能力<br>Basic Learning Outcomes                                                           | A.具備自然科學<br>B.具備觀察、理解<br>C.具備多力<br>D.能多力<br>D.能承<br>E.具備獨立思<br>G.具備基本外國 | 解收對觀、溝闡等環境和通 | 間釋自然環境與人<br>策略、閱讀論文、<br>竟維持熱情、關懷<br>土會責任感與社會<br>直協調與團隊合作 | 、類社會 互<br>、撰寫 環<br>、<br>文<br>、<br>類<br>、<br>類<br>、<br>類<br>、<br>類<br>、<br>類<br>、<br>類<br>、<br>類<br>、<br>類<br>、<br>竟<br>、<br>動<br>、<br>力<br>、<br>力<br>、<br>力<br>、<br>力<br>、<br>力<br>、<br>力<br>、<br>力<br>、<br>力<br>、<br>力 | 竟報導及創意           | 口頭報告    |

| 課程目標與系專業能力<br>相關性 Correlation between                                    | A | В | С | D | Е | F | G |
|--------------------------------------------------------------------------|---|---|---|---|---|---|---|
| Course Objectives and Basic<br>Learning Outcomes                         |   |   |   |   |   |   |   |
| 圖示說明 Illustration : ● 高度相關 Highly correlated ◎中度相關 Moderately correlated |   |   |   |   |   |   |   |

課程大綱

Course Outline

Functions, Graphs

Limits

Definitions of Derivatives

Differentiation Rules

Derivatives of Exponential and Logarithmic Functions

Derivatives of Trigonometric Functions

Maximum and Minimum Values

Curve Sketching

Integrals

Integration and Its Applications

Techniques of Integration (1)

Techniques of Integration (2)

Functions of several variables

Limits and continuity

Partial derivatives

資源需求評估(師資專長之聘任、儀器設備的配合・・・等)

Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

#### 課程要求和教學方式之建議

Course Requirements and Suggested Teaching Methods

課程成績評定之依據和標準

Grading Criteria

其他

Miscellaneous

Textbooks:

Larson, R. Calculus: An Applied Approach, 8th Ed. (or 9th Ed.) Brooks/Cole.

Reference:

Armstrong & Davis (2013). Brief Calculus for the Business, Social, and Life Sciences (3rd edition)

請尊重智慧財產權請合法影印資料 Please consult intellectual property rights before making a photocopy.

# ② 图玄東華大學

課 網 Course Outline (碩士班)

| 中文課程名稱<br>Course Name in Chinese | 社會-生態             | 系統治          | 理與保護區                | 管理         |                   |              |
|----------------------------------|-------------------|--------------|----------------------|------------|-------------------|--------------|
| 英文課程名稱                           | Social-ecolog     | ical system  | n stewardship and    | 1 protecte | ed area manage    | ment         |
| Course Name in English           | Boeiai ceolog     | - I system   | ar ste wardsinp and  | . protecti |                   |              |
| 科目代碼                             |                   | 班 別          | □學士班 Bachel          | lor's 🔲    | 頂專班 Master        | 's program   |
| Course Code                      |                   | Degree       | 碩士班 Master           | ''s        | 享士班 Ph.D.         |              |
| १५ वर्ग                          | □必修 Requi         | ired         | 學分數                  |            | n± +/-            |              |
| 修別<br>T                          | ■選修 Electi        | ve           | Credit(s)            | 3          | 時數                | 3            |
| Type                             | □學程 Progr         | am           |                      |            | Hour(s)           |              |
| 先修課程                             |                   | 1            |                      |            | •                 | •            |
| Prerequisites                    |                   |              |                      |            |                   |              |
|                                  | I                 |              |                      |            |                   | 1            |
|                                  | Ecosysten         | n stewards   | hip involves gove    | ernance i  | n and outside p   | rotected     |
| 課程目標                             | areas, and        | needs into   | erdisciplinary kno   | wledge p   | perspectives. The | his          |
| Course Objectives                | course pro        | ovides a co  | nceptual framew      | ork to un  | derstand dynar    | nics of      |
|                                  | coupled so        | ocial-ecolo  | gical system, and    | the con    | cept and practic  | ce of        |
|                                  | resilience-       | -based soc   | ial-ecological sys   | tem stew   | ardship. It inte  | grates       |
|                                  | three diffe       | erent discip | olines: common-p     | ool reso   | urce governanc    | e,           |
|                                  | protected         | area mana    | gement, and biod     | iversity o | conservation. S   | tudents      |
|                                  | will learn        | stewardsh    | ip from perspecti    | ves of so  | cial and natural  | 1            |
|                                  | sciences, a       | and addres   | s stewardship iss    | ues in an  | d outside prote   | cted         |
|                                  | areas. This       | s course al  | so offers practica   | l training | g through case s  | studies.     |
|                                  |                   |              |                      |            |                   |              |
|                                  | 培養兼具國             | 際視野與         | 培養具備自然和              | 斗學與        | 培養具備環境            | 倫理與          |
|                                  | 本土關懷的學            | 學生           | 社會科學知識的              | 勺人才        | 人文素養的環            | 境公民          |
| 系教育目標                            | To develop stude  | ents who     | To educate students  | s to have  | To teach students | to be        |
| Dept.'s Educational              | care about local  | issues and   | knowledge of both    | the        | environmental cit | izens (i.e., |
| Objectives                       | have an internati | onal         | natural and social s | ciences    | knowledgeable ab  | out          |
|                                  | perspective       |              |                      |            | environmental eth | nics and     |
|                                  |                   |              |                      |            | human issues)     |              |
| 課程目標與系教育目標                       |                   |              |                      |            |                   |              |
| 相關性                              |                   |              |                      |            |                   |              |
| Correlations between Course      |                   |              |                      |            |                   |              |

高度相關 Highly correlated ①中度相關 Moderately correlated

Objectives and Dept.'s Educational Objectives

圖示說明 Definitions

|                               | A.能覺知多                                                                         | 元的自然科                           | 學與社會科            | 學理論並具            | 備研究能力            |                 |  |
|-------------------------------|--------------------------------------------------------------------------------|---------------------------------|------------------|------------------|------------------|-----------------|--|
|                               | To have knowledge of natural and social science theories                       |                                 |                  |                  |                  |                 |  |
|                               | B.具備自然                                                                         | 資源與人類                           | 社會議題之            | 調查分析、            | 規劃與經營            | 之能力             |  |
|                               | To be able t                                                                   | to investigate, a               | nalyze, plan, a  | nd manage botl   | n natural resour | rce and human   |  |
|                               | social issue:                                                                  | S                               |                  |                  |                  |                 |  |
|                               | C.具備將環                                                                         | C.具備將環境倫理與生態思想落實於永續性生活型態的能力     |                  |                  |                  |                 |  |
|                               | To impleme                                                                     | ent sustainable                 | lifestyles based | on environmen    | ntal ethics and  | ecological      |  |
| 多亩兴(甘土) 此上                    | principles                                                                     |                                 |                  |                  |                  |                 |  |
| 系專業(基本) 能力                    | D.能以整全                                                                         | D.能以整全式的觀點來解析環境問題,並具備發展系統性解決方案: |                  |                  |                  |                 |  |
| Basic Learning Outcomes       | 能力                                                                             |                                 |                  |                  |                  |                 |  |
|                               | To resolve environmental issues and develop systematic solutions with a global |                                 |                  |                  |                  | a global        |  |
|                               | perspective                                                                    |                                 |                  |                  |                  |                 |  |
|                               | E.具備系統                                                                         | 分析、未來                           | 思考、溝通            | 協調與團隊            | 合作的能力            |                 |  |
|                               | The ability                                                                    | to analyze, plai                | n, communicate   | e, and coordinat | te with others ( | teamwork)       |  |
|                               | F.具備終身:                                                                        | 學習、國際                           | 視野與外語            | 溝通的能力            |                  |                 |  |
|                               | To instill th                                                                  | e values of life                | elong learning,  | an internationa  | al perspective,  | and the ability |  |
|                               | to communi                                                                     | icate in a foreig               | n language       |                  |                  |                 |  |
| 課程目標與系專業能力                    | A                                                                              | В                               | С                | D                | Е                | F               |  |
| 相關性                           |                                                                                |                                 |                  |                  |                  |                 |  |
| Correlations between Course   |                                                                                |                                 |                  |                  |                  |                 |  |
| Objectives and Basic Learning |                                                                                |                                 | <b>(</b>         |                  |                  |                 |  |
| Outcomes                      |                                                                                |                                 |                  |                  |                  |                 |  |
| 圖示說明 Definitions :            | ● 高度相關                                                                         | Highly cor                      | related 🔘 🕈      | 度相關 Mo           | derately cor     | related         |  |

#### 課程大綱 Course Outline

#### **Topics:**

#### 1. Common-pool resources governance

- -- Common-pool resources and rethinking of tragedy of commons
- -- Traditional common-pool resources institutions
- -- Institutional Analysis and Development Framework (IAD): institutions and collective action
- -- Regional and global common-pool resources governance in a changing world

#### 2. Protected area management

- -- Protected Planet Report 2014
- -- People and parks in a world of changes: Governance, participation and equity
- -- Strengthening capacity to manage protected areas
- -- Evaluating the effectiveness of protected area management

#### 3. Biodiversity conservation

- -- Biodiversity, ecosystem services and human well-being
- -- Protected area and biodiversity conservation
- -- Systematic conservation planning
- -- Social-ecological system and biodiversity conservation

#### 4. Case studies

- -- Taiwanese cases
- -- International cases

#### 資源需求評估(師資專長之聘任、儀器設備的配合・・・等)

Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods

- 1. Lecture
- 2. Discussion: Team Project Report and Presentation
- 3. Term Paper & Presentation

#### 課程成績評定之依據和標準 Grading Criteria

Participation, Course activities (20%)

Team Project (40%)

Term Paper (25%)

Presentation (15%)

其他 Miscellaneous

Course Requirements of the International Graduate Program in the Department of Natural Resources and Environmental Studies (hereafter "the NRES international program"), National Dong Hwa University

### **Compulsory Courses**

| Course Name   | Credit | Course Name          | Credit |
|---------------|--------|----------------------|--------|
| Seminar (I)   | 1      | Directed Study (I)   | 1      |
| Seminar (II)  | 1      | Directed Study (II)  | 1      |
| Seminar (Ⅲ)   | 1      | Thesis Research (I)  | 2      |
| Master Thesis | 0      | Thesis Research (II) | 2      |

#### **Elective Courses**

| Course Name                                                              | Credit | Course Name                                   | Credit |
|--------------------------------------------------------------------------|--------|-----------------------------------------------|--------|
| Special Topics on Ecology                                                | 3      | Special Topics in Earth Science               | 3      |
| Special Topics on Ecosystem Ecology                                      | 3      | Tropical Ecology                              | 3      |
| Introduction to Biogeography                                             | 3      | Biodiversity and Conservation                 | 3      |
| Introduction to Statistics                                               | 3      | Remote Sensing and GIS                        | 3      |
| Socio-Ecological Systems & Traditional Knowledge                         | 3      | History and Philosophy of Ecological Theories | 3      |
| A Global Business Perspective on Sustainable Environment and Development | 3      | Climate Change and<br>Sustainability          | 3      |
| Research Methods in Natural<br>Resources (I)                             | 3      | Research Methods in Natural<br>Resources (II) | 3      |
| Structure of Scientific Papers                                           | 3      | Literature Review                             | 3      |
| Research Proposal Writing in<br>Environmental Sciences                   | 3      | Scientific Writing                            | 3      |
| Socio-Ecological Systems Stewardship and Protected Area Management       | 3      |                                               |        |

- 1. All students must fulfill the following requirements for graduation:
  - (1) Each student must complete at least 24 credit hours of all-English-taught courses at the graduate level, including 9 compulsory and 15 elective credit hours. The details of course registration are described in points 2 and 3.
  - (2) Each student must complete a thesis and meet the requirements for thesis submission set by National Dong Hwa University.
  - (3) Each student must hold an oral defense for the thesis in front of a thesis committee with at least three members.
  - (4) The maximum number of credits excepting Chinese Language Courses for each semester is 12 credits.
- 2. Compulsory courses are described below:
  - (1) Seminar courses I . II and III (one credit hour each ): Students should take seminar I . II and III sequentially and are limited to one seminar course each semester.
  - (2) Directed study I and II (one credit hour each): Students should take directed study I and II sequentially and are limited to one course of directed study each semester.
  - (3) Thesis research I and II (two credit hours each): Students should take thesis research I and II sequentially and are limited to one thesis course each semester.
  - (4) Credits for the above courses are earned only for courses in which a grade of B- or higher is received.
- 3. Students should satisfy the requirements for elective courses with the following regulations:
  - (1) Students must earn 9 credit hours from the elective courses offered as core courses in the NRES international program.
  - (2) Students may take graduate-level, English-taught courses offered within or outside the NRES international program to satisfy the six remaining elective credit hours. However, each student must obtain approval from his/her advisor and the chairperson of the department prior to the inclusion of courses provided outside the NRES international program as graduation requirement.
  - (3) Credits for the above courses are earned only for courses in which a grade of B-or higher is received.

# 自然資源與環境學系/環境與生態研究國際碩士班課程規劃 103 學年度適用

### 必修

| 課程名稱     | 學分數 | 課程名稱    | 學分數 |
|----------|-----|---------|-----|
| 專題討論 (I) | 1   | 引導研究(I) | 1   |
| 專題討論(Ⅱ)  | 1   | 引導研究(Ⅱ) | 1   |
| 專題討論(Ⅲ)  | 1   | 論文研究(I) | 2   |
| 碩士論文     | 0   | 論文研究(Ⅱ) | 2   |

# 選修

| 課程名稱                | 學分數 | 課程名稱        | 學分數 |
|---------------------|-----|-------------|-----|
| 生態學專題               | 3   | 地球科學專題      | 3   |
| 生態系生態學專題            | 3   | 熱帶植物生態學     | 3   |
| 生物地理學概論             | 3   | 生物多樣性與保育    | 3   |
| 統計學緒論               | 3   | 遙測與地理資訊系統   | 3   |
| 社會-生態系統與傳統知識        | 3   | 生態理論的歷史與哲學  | 3   |
| 國際企業與環境永續發展         | 3   | 氣候變化與永續發展專題 | 3   |
| 自然資源研究方法(一)         | 3   | 自然資源研究方法(二) | 3   |
| 環境科學研究計畫寫作          | 3   | 文獻探討        | 3   |
| 科學論文結構              | 3   | 科學寫作        | 3   |
| 社會-生態系統治理與保護區<br>管理 | 3   |             |     |

#### 重要相關規定:

- 1. 學生須滿足下列要求,始得畢業:
- (1).須修畢並通過 24 學分(必修 9 學分及選修 15 學分)以上之全英語授課,與碩、博士層級課程。修課相關規定請參閱第二點及第三點。
- (2). 須完成論文與滿足國立東華大學對論文提交之各項規定。
- (3).須舉行論文口試,口試委員至少需3(含)人以上。
- (4).每學期修課學分上限為12(含)學分(華語課程不計)。

#### 2. 必修課程相關規定:

- (1).專題討論(I)、(Ⅱ)、(Ⅲ)(每門課一學分): 須依序修習此課,且每學期只得上一專題討論課程。
- (2).引導研究(I)、(Ⅱ)(每門課一學分): 須依序修習此課,且每學期只得上一引導研究課程。
- (3).論文研究(I)、(Ⅱ)(每門課二學分): 須依序修習此課,且每學期只得上一論 文研究課程。
- (4).每門課成績要求為 B (含)以上。

#### 3. 選修課程相關規定:

- (1).須於自然資源與環境學系國際碩士班課程規劃選修課程內修滿9(含)學分以上。
- (2).修讀外系、外校所開設之碩、博士層級,且全英語授課課程,經由學生指導教授 及系主任於修課前同意,始得計入該生選修科目之畢業學分數內。
- (3).每門課成績要求為 B (含)以上。

# Requirements of Master of Humanity and Environmental Science Program Academic Year 103

#### **Course Requirement:**

Minimal Total Credits: 25 credits Required Courses: 16 credits Elective Courses: 9 credits

#### **Required Courses**

| Course Name               | Credits | Course Name                | Credits |
|---------------------------|---------|----------------------------|---------|
| Seminar*                  | 4       | Independent Study**        | 6       |
| History and Philosophy of | 2       | Socio-Ecological Systems & | 2       |
| Ecological Theories       | 3       | Traditional Knowledge      | 3       |
| Master Thesis             | 0       |                            |         |

#### **Elective Courses**

| Course Name                    | Credits | Course Name                      | Credits |  |
|--------------------------------|---------|----------------------------------|---------|--|
| Socio-Ecological Systems       |         |                                  |         |  |
| Stewardship and Protected Area | 3       | Ecofeminism                      | 3       |  |
| Management                     |         |                                  |         |  |
| Environmental Casialogy        | 2       | Climate Change and               | 2       |  |
| Environmental Sociology        | 3       | Sustainability                   | 3       |  |
| Indigenous Peoples and         | 2       | Alternative Development and      | 2       |  |
| Eco-Culture Tourism            | 3       | Traditional Ecological Knowledge | 3       |  |
| Environmental lustice          | 2       | Special Topics on                | 2       |  |
| Environmental Justice          | 3       | Environmental Governance         | 3       |  |

<sup>\*</sup> Seminar course (two credit hours each): Students should take seminar twice and are limited to one seminar course each semester.

<sup>\*\*</sup> Independent Study (two credit hours each): Students should take Independent Study three times and are limited to one course of Independent study each semester.

- 1. All students must fulfill the following requirements for graduation:
  - (1) Each student must complete at least 25 credit hours of all-English-taught courses at the graduate level, including 16 required and 9 elective credit hours. The details of course registration are described in points 2 and 3.
  - (2) Each student must complete a thesis and meet the requirements for thesis submission set by National Dong Hwa University.
  - (3) Each student must hold an oral defense for the thesis in front of a thesis committee with at least three members.
  - (4) The maximum number of credits excepting Chinese Language Courses for each semester is 12 credits.

#### 2. Required courses are described below:

- (1) Seminar course (two credit hours each): Students should take seminar twice and are limited to one seminar course each semester.
- (2) Independent Study (two credit hours each): Students should take Independent Study three times and are limited to one course of Independent study each semester.
- (3) Master Thesis: Students should take Master Thesis fourth semester.
- (4) Credits for the above courses are earned only for courses in which a grade of B- or higher is received.
- 3. Students should satisfy the requirements for elective courses with the following regulations:
  - (1) Students may take graduate-level, English-taught courses offered within or outside the Humanity and Environmental Sciences program to satisfy the nine remaining elective credit hours. However, each student must obtain approval from his/her advisor and the dean of the College of Environmental Studies prior to the inclusion of courses provided outside the Humanity and Environmental Sciences program as graduation requirement.
  - (2) Credits for the above courses are earned only for courses in which a grade of B-or higher is received.

## 環境學院人文與環境碩士學位學程課規

#### 103 學年度適用

最低畢業學分數:25學分。

必修:16 學分。 選修:9 學分。

#### 必修

| 課程名稱       | 學分數 | 課程名稱          | 學分數 |
|------------|-----|---------------|-----|
| 專題討論*      | 4   | 獨立研究**        | 6   |
| 生態理論的歷史與哲學 | 3   | 社會-生態系統與傳統 知識 | 3   |
| 碩士論文       | 0   |               |     |

#### 選修

| 課程名稱            | 學分數 | 課程名稱        | 學分數 |
|-----------------|-----|-------------|-----|
| 社會-生態系統治理與保護區管理 | 3   | 生態女性主義      | 3   |
| 環境社會學專題         | 3   | 氣候變化與永續發展專題 | 3   |
| 原住民與生態-文化旅遊     | 3   | 另類發展與傳統生態知識 | 3   |
| 環境正義            | 3   | 環境治理專題      | 3   |

- \* 專題討論(每門課二學分): 學生須修習通過此課二次,且每學期只得上一專題討論課程。
- \*\*獨立研究(每門課二學分):學生須修習通過此課三次,且每學期只得上一獨立研究課程。

#### 重要相關規定:

- 1. 學生須滿足下列要求,始得畢業:
  - (1). 須修畢並通過 25 學分(必修 16 學分及選修 9 學分)以上之全英語授課,與碩、博士層級課程。修課相關規定請參閱第二點及第三點。
  - (2). 須完成論文與滿足國立東華大學對論文提交之各項規定。
  - (3). 須舉行論文口試,口試委員至少需3(含)人以上。
  - (4). 每學期修課學分上限為 12(含)學分(華語課程不計)。

#### 2. 必修課程相關規定:

- (1). 專題討論(每門課二學分): 學生須修習通過此課二次,且每學期只得上一專題討論課程。
- (2). 獨立研究(每門課二學分): 學生須修習通過此課三次,且每學期只得上一獨立研究課程。
- (3). 碩士論文:入學第四學期始得修習。
- (4). 每門課成績要求為 B (含)以上。

#### 3. 選修課程相關規定:

- (1). 修讀外系、外校所開設之碩、博士層級,且全英語授課課程,經由學生指導教授及環境學院院長於修課前同意,始得計入該生選修科目之畢業學分數內。
- (2). 每門課成績要求為 B (含)以上。

#### 國立東華大學環境學院人文與環境碩士學位學程修業要點

# Student Academic Regulations Master of Humanity and Environmental Science Program, National Dong Hwa University

103.09.29 103學年度第1學期環境學院行政暨課程規劃委員會新增通過 103.11.10 103學年度第1學期環境學院院務會議修正通過

- 一、國立東華大學環境學院人文與環境碩士學位學程(以下簡稱本碩士班)為 規範碩士班研究生修業事項,依據本校學則、學位授予辦法及相關規定, 特訂定本修業要點。
- Master of Humanity and Environmental Science Program (HES hereafter) at National Dong Hwa University herein specifies the academic regulations for its master program (master program hereafter) in accordance with the regulations and relevant guidelines for awarding of a degree from this university.
   Academic regulations listed below concern all master's students in the HES.

#### 二、入學資格:

#### 2. Enrollment:

- (一)公立或立案之私立大學或獨立學院或經教育部認可之外國大學各學 系畢業具有學士學位,或應屆畢業或具有同等學歷之資格,經本校碩 士班研究生入學考試通過者(含甄試),得進入本碩士班修讀碩士學 位。
- 2.1. Students holding a master degree from a local or foreign university/college or a bachelor-equivalent diploma recognized by the Ministry of Education, R.O.C., and passed the entrance examination of the master program may enroll in the master program.
- (二)符合教育部訂定之「外國學生來華留學辦法」、「外國學生來台就學辦法」,及「國立東華大學外國學生入學辦法」修讀碩士學位者,得進入本碩士班修讀碩士學位。
- 2.2. Foreign students meeting requirements of the "MOE Regulations Regarding International Students Undertaking Studies in Taiwan", "International Students Undertaking Studies in Taiwan" by the Ministry of Education, R.O.C., and "Admission Guidelines for Foreign Students" by National Dong Hwa University may enroll in the master program.
- (三)申請轉系所組學生,依本校「學生轉系(所)辦法」之規定辦理。

- 2.3. Transfer students meeting the requirements of "Transfer Regulations" by the National Dong Hwa University may enroll in the master program.
  - (四)新生因重病、懷孕或接獲兵役單位征集令,不能按時入學者經檢具 有關證明於註冊前申述理由,向本校申請保留入學資格並獲准者, 得延後進入本碩士班修讀本碩士學位。
- 2.4. New students with serious illness, pregnancy, or receipt of a draft order for military service may file an application to postpone enrollment in the master program. Relevant documents should be submitted prior to registration to retain enrollment qualification for the postpone.
- 三、 修業年限:碩士班一般生修業以2至8學期為限,但在職研究生,得延長 其修業年限4學期。
- 3. Years of enrollment:

Full-time students may enroll in the master program for at least two but no more than eight academic semesters before receiving the master degree. Part-time students may apply for an extension of four academic semesters if necessary.

- 四、 修業規劃:本碩士班提供研究型及實用型兩種修業規劃,前者著重研究能力的養成,後者以專業訓練為主。本碩士班最低畢業學分數詳如課程規劃表。
- 4. Course Requirements:

Course requirements vary with student choice of writing a research thesis or a technical report. A research thesis focuses on enhancing research ability. A technical report focuses on specialty training. The master program requires students to complete the minimum credit hours mentioned in "Course Requirements" before obtaining the master degree.

#### 五、 學分抵免:

- 5. Exemption of credits:
  - (一)本碩士班研究生在入學前曾修過相關課程之學分,抵免學分之資格依 「國立東華大學辦理學生抵免學分辦法」辦理"。
  - 5.1. According to the "National Dong Hwa University policy for substitution of credits", students in the master program may apply to exempt credits from related courses completed before enrollment.
    - (二)申請抵免學分應於取得學分後次學期(新生為入學後第1學期)選課 加退選截止1週前提出,並經環境學院課程規劃委員會審核。

5.2. With the approval of the Council of Academic Affairs of the College of Environmental Studies, students may apply to substitute credits in the semester following the course in which the credits were completed. This application should be made before the add/withdrawal deadline of the following semester. Students in their first semester of enrollment have the entire semester to make this application.

#### (三)學分抵免依下列方式審核:

- 5.3. Criteria for Credit Exemption:
  - 1.未列入大學畢業學分之本碩士班課程達 B-級分或 70 分以上,且未 超過抵免學分上限者,皆可申請抵免。
  - 5.3.1. Students may apply to exempt credit hours for courses accredited by the master or doctoral program with grades of at least 70 (or B-), when the total credit applied remain with the range indicated by 5.3.2.
  - 2.申請抵免學分以 12 學分為限,其中本校其他院系研究所及外校研究所選修學分以 6 學分為限。
  - 5.3.2. A total of 12 credits are equivalent or similar courses allowed for exemption. For courses taken outside the College of Environmental Sciences, National Dong Hwa University, only 6 credits are allowed for exemption.
  - 3.逕行修讀碩士學位學生之學分抵免不受上述12學分之限制,惟其學分數若列入大學部畢業學分,則不得重複計入碩士班畢業學分數。
  - 5.3.3. Applications of students in 3+2 program may exceed the exemption limit from 5.3.2. and credits listed for bachelor requirement are discounted.
  - (四)申請抵免學分時須繳交下列各項資料:1.申請表,2.未列入大學畢業學分證明,3.成績單。
- 5.4. Applicants shall submit an Application Form for Credit Exemption as well as an original copy of transcript to apply for credit exemption.

#### 六、 指導教授之選定:

6. Thesis Advising:

- (一)碩士生應於入學後1學期內,提出指導教授同意書,送學程辦公室、 院核備。
- 6.1. Students in the master program must identify a thesis advisor before the end of the first semester of enrollment. Students should submit the Agreement as Thesis Advisor form with the advisor's signature to the College and Department Office.
- (二)碩士生指導教授以環境學院、原住民民族學院,及人文社會科學學院內專任助理教授以上教師擔任為原則,特殊狀況須以書面向環境學院課程規劃委員會提出申請,經審查通過後方得邀請院外教師擔任指導教授。
- 6.2. In principle, a thesis advisor should be at least a full-time assistant professor in the College of Environmental Studies, College of Indigenous Studies or College of Humanities and Social Sciences. Exceptions may be made with the approval of the Council of Academic Affairs of the College of Environmental Studies, in order to invite a thesis advisor from colleges outside these three colleges.
- (三)碩士生變更指導教授,需提出書面申請,經原指導教授、新指導教授及學程主任同意後始得變更。
- 6.3. Students wish to change thesis advisors must file an application and obtain approval of the original thesis advisor, new thesis advisor, and the chairperson of HES master program.

#### 七、碩士學位考試:

- 7. Master thesis examination:
  - (一) 學位考試以口試行之,並應依下列規定辦理:
  - 7.1. A master thesis examination should take the form of an oral defense.
    Students completed the following requirements may schedule their master thesis defense.
    - 1. 口試以公開舉行為原則,須於事前公佈口試時間、地點及題目。
    - 7.1.1. The master thesis defense shall be held in public. The time, location, and master thesis topic shall be announced prior to the defense.
    - 2. 學位考試委員應親自出席學位口試,不得委託他人為代表,碩士學位考試委員會至少應有委員三人出席,始得舉行。

- 7.1.2. The Examination Committee must be present in person and shall not be replaced by another person. At least three examiners must attend the master thesis defense.
- 3. 研究型修業規劃之碩士生的學位考試,採個別辦理;實用型修業規 劃之碩士生的學位考試,於每學期期末統一辦理。
- 7.1.3. Date of the thesis defense for a research thesis may be scheduled individually. Date of the defense for technical report should be scheduled with other defenses of the same kind at the end of each semester.
- 4. 學位考試成績,以70(B-)分為及格,100(A+)為滿分,評定以 1次為限,並以出席委員評定分數平均決定之,但碩士學位考試有 二分之一以上出席委員評定不及格者,以不及格論,不予平均。
- 7.1.4. Score for the master thesis defense is determined by averaging scores from examiners attending the defense. An average score of at least 70 (B-) and no more than half of the committee grant the score lower than 70 are required to pass the examination. The full score for the thesis defense is 100 points (A+).
- 5. 已申請學位考試之研究生,若因故無法於該學期內完成學位考試, 應於學校行事曆規定學期結束日之前報請學校撤銷該學期學位考 試之申請。逾期未撤銷者,以1次不及格論。
- 7.1.5. Students may withdraw the application for thesis defense before the end for the semester. Failure to withdraw by the deadline will result in a record of thesis defense failure.
- 6. 論文有抄襲或舞弊情事,經學位考試委員會審查確定者,以不及格 論,並送本校學生獎懲委員會議處。
- 7.1.6. Any instance of plagiarism or unethical conduct in a master thesis, evaluated and confirmed by the Examination Committee, will lead to a non-passing grade for the thesis. The case shall be sent to the disciplinary committee of the university.
- 學位考試不通過而其修業年限尚未屆滿者,得於次學期或次學年申請重考,重考以1次為限,重考不及格者,即令退學。
- 7.1.7. A student who fails the first master thesis defense before the year limit of enrollment may apply to retake the master thesis defense in the following academic semester or the following academic year.

Students failing the second thesis defense shall be dismissed from the program.

- (二)碩士生須在舉行口試6週前提交碩士考試題目及口試時間。
- 7.2. Students in the master program must submit the title of master thesis and the time of oral defense six weeks before the defense.
- (三)碩士學位考試委員三至五人,校外委員須佔三分之一(含)以上,由委員互推一位為召集人,但指導教授不得擔任召集人。採研究型修業規劃者之考試委員由指導教授推薦,採實用型修業規劃者之考試委員由環境學院行政會議自指導教授提出之推薦名單中圈選,由系、院提請校長遴聘之。碩士班研究生之配偶或三親等內之血親、姻親,不得擔任其碩士學位考試委員。
- 7.3. The Examination Committee for the master thesis defense shall consist of three to five examiners with at least one-third of the examiners from off-campus. The Examination Committee members should elect a chair through mutual consent. A student's advisor may not serve as the chair. Committee members for students of research theses chosen based on recommendations of the student's advisor. Examination committees for students of technical reports are selected by the Administrative Council of the College of Environmental Studies from the list of recommendations, provided by thesis advisors. In the latter case, examiners shall be nominated by the head of the department and invited by the president of the university. A student's spouse, blood relatives, or in-laws within three degrees of relationship may not serve in any capacity on the Examining Committee.
  - (四)碩士學位考試委員,除對研究生所提研究主題有專門研究者外,並應 具有下列資格之一:
- 7.4. Members of examination committee should be experts in the student's field of research and meet the following requirements:
  - 1. 曾任教授、副教授者。
  - 7.4.1. Full professor or associate professor in a university.
  - 2. 擔任中央研究院院士或曾任中央研究院研究員、副研究員者。
  - 7.4.2. Members of the Academia Sinica: full research fellow or associate research fellow of the Academia Sinica.
  - 3. 獲有博士學位,在學術上著有成就者。

- 7.4.3. Professionals holding a doctorate degree and having distinct accomplishments in the field of study.
- 4. 屬於稀少性或特殊性學科,在學術上或專業上著有成就者。
- 7.4.4. Professionals with distinct accomplishments in a special field of study.

前項第三款及第四款之提聘資格認定標準,由學程主任、環境學院院長認定之。

Approval of examiners meeting requirements 7.4.3, or 7.4.4 should be determined by the dean of the College of Environmental Studies and the chairperson of the HES program.

- 八、本校對已授予之碩士學位,如發現有抄襲或舞弊情事,經調查屬實者,則撤 銷其學位,追繳其已發之學位證書。
- 8. Substantiation of any instance of plagiarism or fraud in the submitted thesis will result in revoking the degree and reclaiming the diploma.
- 九、其他未盡之事宜,悉依教育部有關法令、本校學則及規章辦法辦理。
- 9. Any matters regarding master degrees not listed herein shall be implemented in accordance with relevant regulations of Ministry of Education, academic regulations, and relevant regulations of the university.
- 十、本要點經「環境學院院務會議」通過後公告實施並報「教務會議」備查,修 正時亦同。
- 10. These regulations are in effect upon approval by the Council of College Affairs of the College of Environmental Studies and review by the Council for Academic Affairs of National Dong Hwa University.
- -以下空白-
- -the end-

### 國立東華大學自然資源與環境學系碩士班修業要點

Student Academic Regulations
Master Program
Department of Natural Resources and Environmental Studies,
National Dong Hwa University

98.09.28 98學年度第1學期環境學院第1次院務會議通過
99.01.06 98學年度第1學期第2次教務會議通過
99.11.15 99學年第1學期環境學院第1次院務會議修正通過
100.05.09 99學年第2學期環境學院第1次院務會議修正通過
100.06.22 99學年度第2學期第2次教務會議通通
102.04.01 101學年度第2學期環境學院第1次院務會議修正通過
102.05.27 101學年度第2學期環境學院第1次院務會議修正通過
102.05.27 101學年度第2學期環境學院第2次院務會議修正通過
103.05.26 102學年度第2學期環境學院課程規劃委員會修正通過
103.09.29 103學年度第1學期環境學院行政暨課程規劃委員會修正通過
103.11.10 103學年度第1學期環境學院第1次院務會議修正通過

- 一、國立東華大學自然資源與環境學系碩士班(以下簡稱本碩士班)為規範碩士班研究生修業事項,依據本校學則、學位授予辦法及相關規定,特訂定本修業要點。
- The Department of Natural Resources and Environmental Studies (NRES hereafter) at National Dong Hwa University herein specifies the academic regulations for its master program (master program hereafter) in accordance with the regulations and relevant guidelines for awarding of a degree from this university. Academic regulations listed below concern all master's students in the NRES.

#### 二、入學資格:

- 2. Enrollment:
  - (一)公立或立案之私立大學或獨立學院或經教育部認可之外國大學各學系畢業具有學士學位,或應屆畢業或具有同等學歷之資格,經本校碩士班研究生入學考試通過者(含甄試),得進入本碩士班修讀碩士學位。
  - 2.1.Students holding a master degree from a local or foreign university/college or a bachelor-equivalent diploma recognized by the Ministry of Education, R.O.C., and passed the entrance examination of the master program may enroll in the master program.
  - (二)符合教育部訂定之「外國學生來華留學辦法」、「外國學生來台就學辦法」,及「國立東華大學外國學生入學辦法」修讀碩士學位者,得進入本碩士班修讀碩士學位。
  - 2.2. Foreign students meeting requirements of the "MOE Regulations Regarding International Students Undertaking Studies in Taiwan", "International Students Undertaking Studies in Taiwan" by the Ministry of Education, R.O.C., and "Admission Guidelines for Foreign Students" by National Dong Hwa University may enroll in the master program.

- (三)申請轉系所組學生,依本校「學生轉系(所)辦法」之規定辦理。
- 2.3. Transfer students meeting the requirements of "Transfer Regulations" by the National Dong Hwa University may enroll in the master program.
  - (四)新生因重病、懷孕或接獲兵役單位征集令,不能按時入學者經檢具有關證明於註冊前申述理由,向本校申請保留入學資格並獲准者,得延後進入本碩士班修讀本碩士學位。
- 2.4. New students with serious illness, pregnancy, or receipt of a draft order for military service may file an application to postpone enrollment in the master program. Relevant documents should be submitted prior to registration to retain enrollment qualification for the postpone.
- 三、 修業年限:碩士班一般生修業以1至4學年為限,但在職研究生,得延長其修業年限2 學年。
- 3. Years of enrollment:

Full-time students may enroll in the master program for at least one but no more than four academic years before receiving the master degree. Part-time students may apply for an extension of two academic years if necessary.

- 四、 修業規劃:本碩士班提供研究型及實用型兩種修業規劃,前者著重研究能力的養成,後 者以專業訓練為主。本碩士班最低畢業學分數詳如課程規劃表。
- 4. Course Requirements:

Course requirements vary with student choice of writing a research thesis or a technical report. A research thesis focuses on enhancing research ability. A technical report focuses on specialty training. The master program requires students to complete the minimum credit hours mentioned in "Course Requirements" before obtaining the master degree.

#### 五、 學分抵免:

- 5. Exemption of credits:
  - (一)本碩士班研究生在入學前曾修過相關課程之學分,抵免學分之資格依「國立東華大學辦理學生抵免學分辦法」辦理"。
  - 5.1. According to the "National Dong Hwa University policy for substitution of credits", students in the master program may apply to exempt credits from related courses completed before enrollment.
    - (二)申請抵免學分應於取得學分後次學期(新生為入學後第1學期)選課加退選截止1 週前提出,並經環境學院課程規劃委員會審核。

5.2. With the approval of the Council of College Academic Affairs of the College of Environmental Studies, students may apply to substitute credits in the semester following the course in which the credits were completed. This application should be made before the add/withdrawal deadline of the following semester. Students in their first semester of enrollment have the entire semester to make this application.

#### (三)學分抵免依下列方式審核:

- 5.3. Criteria for Credit Exemption:
  - 1.未列入大學畢業學分之本碩士班課程達 B-級分或 70 分以上,且未超過抵免學分上限者,皆可申請抵免。
  - 5.3.1. Students may apply to exempt credit hours for courses accredited by the master or doctoral program with grades of at least 70 (or B-), when the total credit applied remain with the range indicated by 5.3.2.
  - 2.申請抵免學分以 12 學分為限,其中本校其他院系研究所及外校研究所選修學分以 6 學分為限。
  - 5.3.2. A total of 12 credits are equivalent or similar courses allowed for exemption. For courses taken outside the College of Environmental Sciences, National Dong Hwa University, only 6 credits are allowed for exemption.
  - 3. 逕行修讀碩士學位學生之學分抵免不受上述12學分之限制,惟其學分數若列入大學部畢業學分,則不得重複計入碩士班畢業學分數。
  - 5.3.3. Applications of students in 3+2 program may exceed the exemption limit from 5.3.2. and credits listed for bachelor requirement are discounted.
  - (四)申請抵免學分時須繳交下列各項資料:1.申請表,2.未列入大學畢業學分證明,3. 成績單。
- 5.4. Applicants shall submit an Application Form for Credit Exemption as well as an original copy of transcript to apply for credit exemption.

#### 六、 指導教授之選定:

- 6. Thesis Advising:
  - (一)碩士生應於入學後1學期內,提出指導教授同意書,送系、院核備。
  - 6.1.Students in the master program must identify an advisor before the end of the first semester of enrollment. Students should submit the Agreement as Thesis Advisor form with the advisor's signature to the College and Department Office.

- (二)碩士生指導教授以本系專任助理教授以上教師擔任為原則,特殊狀況須以書面向環境學院課程規劃委員會提出申請,經審查通過後方得邀請系外教師擔任指導教授。
- 6.2. In principle, a thesis advisor should be at least a full-time assistant professor in the department. Exceptions may be made with the approval of the Council of Academic Affairs of the College of Environmental Studies, in order to invite a thesis advisor from outside the department.
- (三)碩士生變更指導教授,需提出書面申請,經原指導教授、新指導教授及系主任同意 後始得變更。
- 6.3. Students wish to change thesis advisors must file an application and obtain approval of the original thesis advisor, new thesis advisor, and the chairperson of NRES master program.

#### 七、碩士學位考試:

- 7. Master thesis examination:
  - (一)學位考試以口試行之,並應依下列規定辦理:
  - 7.1. A master thesis examination should take the form of an oral defense. Students completed the following requirements may schedule their master thesis defense.
    - 1. 口試以公開舉行為原則,須於事前公佈口試時間、地點及題目。
    - 7.1.1. The master thesis defense shall be held in public. The time, location, and master thesis topic shall be announced prior to the defense.
    - 2. 學位考試委員應親自出席學位口試,不得委託他人為代表,碩士學位考試委員會 至少應有委員三人出席,始得舉行。
    - 7.1.2. The Examination Committee must be present in person and shall not be replaced by another person. At least three examiners must attend the master thesis defense.
    - 3. 研究型修業規劃之碩士生的學位考試,採個別辦理;實用型修業規劃之碩士生的 學位考試,於每學期期末統一辦理。
    - 7.1.3. Date of the thesis defense for a research thesis may be scheduled individually.

      Date of the defense for technical report should be scheduled with other defenses of the same kind at the end of each semester.
    - 4. 學位考試成績,以70(B-)分為及格,100(A+)為滿分,評定以1次為限,並以出席委員評定分數平均決定之,但碩士學位考試有二分之一以上出席委員評定不及格者,以不及格論,不予平均。

- 7.1.4. Score for the master thesis defense is determined by averaging scores from examiners attending the defense. An average score of at least 70 (B-) and no more than half of the committee grant the score lower than 70 are required to pass the examination. The full score for the thesis defense is 100 points (A+).
- 5. 已申請學位考試之研究生,若因故無法於該學期內完成學位考試,應於學校行事曆規定學期結束日之前報請學校撤銷該學期學位考試之申請。逾期未撤銷者,以 1次不及格論。
- 7.1.5. Students may withdraw the application for thesis defense before the end for the semester. Failure to withdraw by the deadline will result in a record of thesis defense failure.
- 6. 論文有抄襲或舞弊情事,經學位考試委員會審查確定者,以不及格論,並送本校 學生獎懲委員會議處。
- 7.1.6. Any instance of plagiarism or unethical conduct in a master thesis, evaluated and confirmed by the Examination Committee, will lead to a non-passing grade for the thesis. The case shall be sent to the disciplinary committee of the university.
- 7. 學位考試不通過,而其修業年限尚未屆滿者,得於次學期或次學年申請重考,重 考以1次為限,重考不及格者,即令退學。
- 7.1.7. If a student fails the master thesis defense and the term of study has not yet expired, that student may apply to retake the master thesis defense in the following academic semester or the following academic year. Students failing a second time shall be dismissed from the program.
- (二)碩士生須在舉行口試6週前提交碩士考試題目及口試時間。
- 7.2. Students in the master program must submit the title of master thesis and the time of oral defense six weeks before the defense.
- (三)碩士學位考試委員三至五人,校外委員須佔三分之一(含)以上,由委員互推一位 為召集人,但指導教授不得擔任召集人。採研究型修業規劃者之考試委員由指導教 授推薦,採實用型修業規劃者之考試委員由院行政會議自指導教授提出之推薦名單 中圈選,由系、院提請校長遴聘之。碩士班研究生之配偶或三親等內之血親、姻親, 不得擔任其碩士學位考試委員。
- 7.3. The Examination Committee for the master thesis defense shall consist of three to five examiners with at least one-third of the examiners from off-campus. The Examination Committee members should elect a chair through mutual consent. A student's advisor may not serve as the chair. Committee members for students of research theses chosen

based on recommendations of the student's advisor. Examination committees for students of technical reports are selected by the Administrative Council of the College of Environmental Studies from the list of recommendations, provided by thesis advisors. In the latter case, examiners shall be nominated by the head of the department and invited by the president of the university. A student's spouse, blood relatives, or in-laws within three degrees of relationship may not serve in any capacity on the Examining Committee.

- (四)碩士學位考試委員,除對研究生所提研究主題有專門研究者外,並應具有下列資格之一:
- 7.4. Members of examination committee should be experts in the student's field of research and meet the following requirements:
  - 1. 曾任教授、副教授者。
  - 7.4.1. Full professor or associate professors in a university.
  - 2. 擔任中央研究院院士或曾任中央研究院研究員、副研究員者。
  - 7.4.2. Members of the Academia Sinica: full research fellow or associate research fellow of the Academia Sinica.
  - 3. 獲有博士學位,在學術上著有成就者。
  - 7.4.3. Professionals holding a doctorate degree and having distinct accomplishments in the field of study.
  - 4. 屬於稀少性或特殊性學科,在學術上或專業上著有成就者。
  - 7.4.4. Professionals with distinct accomplishments in a special field of study.

前項第三款及第四款之提聘資格認定標準,由系主任、院長認定之。

Approval of examiners meeting requirements 7.4.3, or 7.4.4 should be determined by the dean of the College of Environmental Studies and the chairperson of the NRES program.

- 八、本校對已授予之碩士學位,如發現有抄襲或舞弊情事,經調查屬實者,則撤銷其學位,追 繳其已發之學位證書。
- 8. Substantiation of any instance of plagiarism or fraud in the submitted thesis will result in revoking the degree and reclaiming the diploma.
- 九、其他未盡之事宜,悉依教育部有關法令、本校學則及規章辦法辦理。
- 9. Any matters regarding master degrees not listed herein shall be implemented in accordance with relevant regulations of Ministry of Education, academic regulations, and relevant regulations of

the university.

- 十、本要點經本院「院務會議」通過後公告實施並報「教務會議」備查,修正時亦同。
- 10. These regulations are in effect since approved by the Council of College Affairs of the College of Environmental Studies, review by the Council for Academic Affairs of National Dong Hwa University.
- -以下空白-
- -the end-

### 國立東華大學環境學院

# 103 年第1 學期第4次行政暨課程規劃委員會暨評鑑會議

# 簽到表

開會時間:104年1月5日(星期一)下午13:30時

開會地點:環境學院 A205 會議室

主 持 人:夏院長禹九

出席人員:

| 委員     | 簽名      | 委員       | 簽名  |
|--------|---------|----------|-----|
| 夏禹九 委員 | 是我们     | 曾偉宏 委員   | 請假  |
| 許世璋 委員 | 护妆件     | 潘威諭 學生代表 |     |
| 吳海音 委員 | 是好      | 劉 樵 學生代表 |     |
| 梁明煌 委員 | 三多种名    | 陳興芝 助理   | 東发芝 |
| 戴興盛 委員 | The Ewa | 夏懿心 助理   | 夏蒙心 |
| 張有和 委員 | Etolo   | 李莉莉 助理   | 水料  |
| 陳紫娥 委員 | 請假      |          |     |
| 楊懿如 委員 | To the  |          |     |
| 張文彥 委員 | 請假      |          |     |
| 孫義方 委員 | 得美方     |          |     |
| 顏君毅 委員 | 和影响     |          |     |
| 李俊鴻 委員 | FEN     |          |     |