University of Arizona
Format and Guidelines
For
Graduate Certificates

I. Certificate Name and Description
   • Name of the certificate - Aquaculture Certificate
   • Affiliation of College, Department, and Oversight Committee Membership
   • Specify whether the certificate is affiliated with an existing degree program or is a stand-alone certificate.
   • Stand Alone Program

II. Certificate Requirements - Any changes to the originally approved certificate must be approved by the Graduate College.
   List the certificate requirements, including number of credit hours required and any special requirements for completion.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSC 556</td>
<td>Aquaculture</td>
<td>3</td>
</tr>
<tr>
<td>SWES 575</td>
<td>Biology and Culture of Algae</td>
<td>4</td>
</tr>
<tr>
<td>VSC 565</td>
<td>Shrimp Pathology</td>
<td>3</td>
</tr>
<tr>
<td>SWES 910</td>
<td>Aquaculture Research (Intern)</td>
<td>3</td>
</tr>
</tbody>
</table>

1. Select one of these three electives
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWES 574</td>
<td>Aquatic Plants and the Environment</td>
<td>4</td>
</tr>
<tr>
<td>SWES 525</td>
<td>Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>ECOL 582</td>
<td>Ichthyology</td>
<td>3</td>
</tr>
</tbody>
</table>

   • List current and new courses needed to meet certificate requirements. NONE
   • Describe any courses that will be offered via distance learning or other distributed methods? NONE
   • Student Learning Outcomes -
     The students completing this program will have additional skills and experience that will improve their ability to handle advanced projects and tasks in commercial and governmental aquaculture programs. They will have several advanced skill sets that will allow them to coordinate field research, operate a pathology lab, maintain algae cultures, or manage a hatchery or commercial farm.

III. Student Admittance/Advising/Completion - Student must have no less than a bachelor's degree for a post-baccalaureate, a master's degree for a Post-Master's certificate or be currently enrolled in a graduate level program.
   • Are there prerequisites or standardized tests required for admission?
     B.S. Degree in appropriate field, passing TOEFL score for International Students, GRE grades must be submitted.
• Is concurrent enrollment in a degree program allowed, required?
  No

• Is there a residency requirement?
  No

• Will transfer credit be accepted? How many credit hours maximum? (May not exceed 6)
  Yes, up to 6 units could be transferred

• What provisions are included for student advising?
  A program coordinator (Pablo Gonzalez will be responsible)

• May a student transfer from a certificate to a degree program? What are the provisions?
  Yes. The student would need to meet all the department requirements for admission and then complete the requirements. Funds from the TIES program may or may not be available.

IV. **Certificate and Student Outcomes**

• Provide a plan and frequency for assessing the intended certificate outcomes both for students and the certificate.

The program will be reviewed at the end of the Aquaculture TIES program in Dec. 2007. We will determine the efficacy based on the success of graduates in the field in Mexico and future options for funding and student participation.

The Aquaculture TIES program is a US-AID supported grant to the University of Arizona, with Fikesimmons as PI, which will fund the first group of students for the certificate program. The grant, already well into the second year, contains funds for travel, tuition and stipends for Mexican graduate students to attend UA and participate in the Aquaculture Certificate Program.

Additional domestic and international students will also be considered for the Aquaculture Certificate Program. In fact we have already had inquiries from India, South Africa, Indonesia, and Argentina.

V. **Is there sufficient student demand for the certificate?**

• What is the anticipated student enrollment for this certificate? The current grant funding will support two students per year. Additional students would be welcome if they have funding. Max of 5 students per year.

• Will there be any collaboration with other departments or universities to maximize resources? Yes, Veterinary Science and Wildlife and Fisheries Science will offer courses of interest.

• Program demand/need.
The Administration request for applications to develop certificate programs coincided with my application to US-AID for the grant funding. The certificate program meshed well with the goals of the funding agency and surely played a part in winning the grant. Funds for the program are included in the Aquaculture TIES grant. To date we have not been able to enroll anyone in the certificate program because of the delays in implementation. We have received inquiries from additional students regarding openings based on the grant and my comments to international students and various industry members. Professionals from Arizona Game and Fish and other natural resource agencies will also be potential clients/students. Many of these employees desire additional education without a full graduate degree program.

VI. Expected Faculty and Resource Requirements

- List the name, rank, highest degree and estimate of level of involvement of all current faculty who will participate in the program.
  
  Kevin Fitzsimmons, Professor/Research Scientist, Ph.D., 20% of time to administer the Aquaculture TIES project.
  
  Donald Lightner, Professor, Ph.D., would teach two of the courses included in the certificate curriculum.

- Describe additional faculty needed for the first three years of the certificate.
  
  NONE

- Give the present numbers of FTE students and FTE faculty in the department or unit in which the certificate is offered.
  
  80 FTE students, 24 FTE Faculty

- Give the proposed numbers of FTE students and FTE faculty for the next three years in the department or unit in which the certificate is offered.
  
  80 FTE students, 24 FTE Faculty

VII. Submit a supporting letter from the college dean and department head verifying that the proposed certificate has received faculty approval through appropriate procedures and that the unit has the resources to support the certificate as proposed.
MEMORANDUM

DATE: November 8, 2005

TO: Dianne Horgan
   Associate Dean, Graduate College

FROM: David E. Cox
       Associate Dean and Director of Academic Programs

SUBJECT: Proposed Graduate Certificate Programs in Aquaculture and Water Policy

The College of Agriculture and Life Sciences Curriculum Committee, the Office of Academic Programs and the Department of Soil, Water and Environmental Science have jointly approved and submit the attached proposals for the establishment of a Graduate Certificate Program in Water Policy and a Graduate Certificate Programs in Aquaculture. We support the founding of these programs and find that the department of Soil, Water and Environmental Science has the resources to sustain them.

The attached documentation details the rationale for the proposed programs. We particularly, strongly support the interdisciplinary nature of the Graduate Certificate Program in Water Policy. Interdisciplinary curriculum is of vital importance for our students.

If specific questions arise regarding the proposals please contact La Tanya S. Autry in the Office of Academic Programs at 621-3613, latanyas@cals.arizona.edu.

Thank you.

cc: Eugene G. Sander, Vice Provost and Dean
    Jeffrey Silvertooth, Department Head, Soil, Water and Environmental Science

DEC:la
Dr. David E. Cox
Associate Dean
Academic Programs
College of Agriculture and Life Sciences
Fears 201
CAMPUS

Dear Dave,

As you are no doubt aware, the Graduate College has expressed considerable interest in offering certificate programs and professional master’s degrees, in addition to traditional degree programs. To this end, they have requested that departments submit proposals for their review.

The SWES Department has developed several such proposals, and we are now ready to formally submit the Graduate Certificate in Aquaculture proposal for your consideration and approval. The Aquaculture Certificate was conceived and developed by Dr. Kevin Fitzsimmons, whose research and background in aquaculture is substantial. In addition to his appointment as a Professor and Research Scientist in SWES, Dr. Fitzsimmons is also the President of the World Aquaculture Society. The certificate is in response to the expressed needs of students primarily from Mexico, and will be funded in part by the TIES program.

Dr. Fitzsimmons has taken a conservative, and in my view, a very realistic approach to enrollment and program assessment. He anticipates TIES funding for two students per year, with a maximum of five students. The program will be reviewed at the end of the Aquaculture TIES program in December 2007, to determine the efficacy of the program, based on the success of graduates in the field in Mexico, as well as future options for funding and student participation. A copy of the Aquaculture Certificate Proposal is attached for your review.

We request that you provide us with a supporting letter, verifying that the proposed certificate has received approval through appropriate procedures and that SWES has the resources to support the proposed Aquaculture Certificate. We would appreciate your prompt review as we would like to submit the proposal as soon as possible to the Graduate College.

Thank you for your support, and please don’t hesitate to contact me if you have questions.

Sincerely,

[Signature]

Jean C. Silvertong
Professor and Head of Department

End
Dr. David E. Cox
Associate Dean
Academic Programs
College of Agriculture and Life Sciences
Forbes 201
CAMPUS

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Thank you for your support, and please don't hesitate to contact me if you have questions.

Sincerely,

Jeffrey C. Silvertooth
Professor and Head of Department

Encl.
May 10, 2006

To: Joel Sideman, Executive Director

From: Stephanie Jacobson, Associate Executive Director for Academic and Student Affairs

Subject: Request for Academic Program Name Change

Per ABOR Policy 2-204.C.1, University of Arizona requests to change the name of a major and minor program from Agricultural Economics and Management to Agribusiness Economics and Management, effective January, 2007.

The CAO's supported this request on May 8, 2006.

Please indicate your approval by signing in the space provided below. We will provide a copy to University of Arizona. This change will be included in the summary list of program change items approved by the Executive Director for the June 16-17, 2006 Board report.

Thank you.

Approved: 

Joel Sideman, Executive Director

Date: 5/10/06
June 5, 2006

To: Joel Sideman, Executive Director

From: Stephanie Jacobson, Associate Executive Director for Academic and Student Affairs

Subject: Request for Academic Program Name Change

Per ABOR Policy 2-204.C.1, the University of Arizona requests to rename the degree title of three programs to a common degree type: the Master of Science of Applied Biosciences (degree type MSB), with a major in applied biosciences; the Master of Science in Mathematical Science (MSM), with a major in applied mathematics; and the Master of Science in Applied and Industrial Physics (MSP), with a major in applied and industrial physics to the degree type Professional Science Masters (PSM), retaining the appropriate major title.

The CAO's supported this request on May 18, 2006 at their regular meeting.

Please indicate your approval by signing in the space provided below. We will provide a copy to University of Arizona. This change will be included in the summary list of program charge items approved by the Executive Director for the June Board report.

Thank you.

Approved: [Signature]
Joel Sideman, Executive Director
Date: 6/15/06
The University of Arizona
Graduate Certificate Summary

Certificate Name: Acute Care Nurse Practitioner

Certificate Description:
To prepare nurses to care for patients who are acutely and critically ill with multiple complex needs. Graduates will provide care to patients across a broad spectrum of "acute" conditions, including management of acute, critical and chronic disease. Emphasis areas are cardiopulmonary, critical care, emergency/trauma, bioterrorism and the unique acute care needs of rural populations.

Managing Department(s):
Nursing

College(s): College of Nursing
Other Major/Degree with same name: ☐ Yes ☒ No

REQUIREMENTS:

Number of Credit Hours required: 28 units (22 graded) and 810 clinical hours
Special requirements for completion:

Admission Requirements:
Prerequisites: Bachelor's and Master's degree (can pursue certificate in last semester of Master's program; certificate will be awarded after the Master's)
Standardized Tests: None
Concurrent Enrollment in a Degree Program: ☒ Allowed ☐ Required
University Credit Requirement: 28

Transfer Credit Max Units: UA: 6 Non-UA: 6

May certificate credits count toward a Degree Program?
☐ Yes ☒ If so, how many?
☐ No

New Courses Needed? Are the Descriptions Adequate?
☐ Yes ☒ Yes
☒ No ☐ No

Are Courses Offered via Distance Learning or other Distributed Methods?
☐ Yes ☒ No

EVALUATION:
Are the following adequate?
Student Learning Outcomes ☒ Yes ☐ No
Student Admission Requirements ☒ Yes ☐ No
Advising Requirements ☒ Yes ☐ No
June 15, 2006

Dianne Horgan  
Associate Dean  
The University of Arizona Graduate College  
Administration 322  
PO Box 210066  
Tucson, AZ 85721-0066

Dear Ms. Horgan,

Attached please find a copy of the new Post-Master's Certificate for Acute Care to be offered by the University of Arizona College of Nursing. This letter is to also inform you of my support for this new certificate program.

The Acute Care Post-Master's Certificate program has received faculty approval through the appropriate procedures. The College of Nursing has the adequate resources necessary to support the proposed certificate program.

Thank you very much for your attention to this matter.

Sincerely,

[Signature]

Marjorie A. Isenberg, DNSc, RN, FAAN  
Dean and Professor

MAJjb

Attachment
The University of Arizona
Graduate Certificate Summary

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Special requirements for completion:

Admission Requirements:

Prerequisites: Bachelor's and Master's degree (can pursue certificate in last semester of Master's program; certificate will be awarded after the Master's)

Standardized Tests: None

Concurrent Enrollment in a Degree Program: ☐ Allowed ☒ Required

University Credit Requirement: 28

Transfer Credit Max Units: UA: 6 Non-UA: 6

May certificate credits count toward a Degree Program?
☐ Yes If so, how many?
☒ No

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☐ Yes ☒ Yes
☒ No

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☐ Yes ☒ No

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Are the following adequate?

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Student Admission Requirements ☐ Yes ☒ No
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<table>
<thead>
<tr>
<th>Certificate and Student Outcomes Assessment</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Requirements Sufficient for up to 3 years?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Faculty Resources</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is there Sufficient Demand &amp; Need for this Certificate?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Explain any No's:

**Appropriate Supporting Letters Submitted:**
- [x] College Dean
  - M. Isenberg
- [ ] Department Head
- [ ] Other Supporting Units

**Special Notes:**
June 15, 2006

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Associate Dean  
The University of Arizona Graduate College  
Administration 322  
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Tucson, AZ 85721-0066

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[Signature]

Majorie A. Isenberg, DNSc, RN, FAAN  
Dean and Professor

MA:jb  
Attachment