Note: New programs requiring a [program fee](https://academicadmin.arizona.edu/university-fees/program-fees) must have the fee approved prior to implementation.

1. **CERTIFICATE DESCRIPTION**–provide a marketing description for the proposed certificate. Include the purpose (preparation for professional certification exams, degree program recruitment, or employability enhancement), nature, and program highlights. The description must match departmental and college websites, [Degree Search](https://www.arizona.edu/degree-search) & [Academic Advisement Reports](https://catalog.arizona.edu/undergraduate-programs) / [Graduate Catalog and Program Descriptions](https://grad.arizona.edu/catalog/) page, handouts, promotional materials, etc.
2. **NEED FOR THE CERTIFICATE/JUSTIFICATION** - describe how the certificate fulfills the needs of the city, state, region, and nation. Provide market analysis data or other tangible evidence of the need for and interest in the proposed certificate. This might include results from surveys of current students, alumni, and/or employers or reference to student enrollments in similar programs in the state or region. Include an assessment of the employment opportunities for graduates of the program during the next three years. Curricular Affairs can provide a job posting/demand report by skills obtained/outcomes/CIP code of the proposed certificate. Please contact the Office of Curricular Affairs to request the report for your proposal.
3. **PROGRAM AFFILIATION**- specify whether the UA offers an affiliated program at the undergraduate or graduate level. The affiliated program may or may not have the same name as the proposed certificate. Will there be any collaboration with other departments or universities to maximize resources? If there is collaboration, please include a memo (email is acceptable) of support from the applicable parties.

1. **CERTIFICATE REQUIREMENTS**– complete the table below to list the certificate requirements, including minimum number of credit hours, required core, electives, and any special requirements. Information in this section must be consistent throughout the proposal documents (comparison chart, department checklists, curricular/assessment map, etc.).

**UNDERGRADUATE CERTIFICATE**Requirements should include sufficient units to provide a substantive program and an appropriate level of academic rigor and in no case be less than 12 units of credit. Delete EXAMPLE column before submitting/uploading; if Graduate Certificate (below) does not apply, delete that table, as well.

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| Minimum total units required |  | EXAMPLE 12 |
| Minimum upper division units |  | 9 |
| Total transfer units that may apply to the certificate. *Note: A minimum of six (6) units used to complete the certificate must be University credit.* |  | 6 |
| Pre-admissions expectations (i.e., academic training to be completed prior to admission)  |  | (completion of specific coursework, minimum GPA, interview, application, etc.) |
| Certificate requirements. List all certificate requirements including core and electives. Courses listed must include **course prefix, number, units, and title**. **Mark new coursework (New)**. Include any limits/restrictions needed. Provide email(s)/letter(s) of support from home department head(s) for courses not owned by your department. |  | Complete 9 units of core coursework:-ECOL 547 (3) Introduction to Theoretical Ecology-ARE 631 (3) Arts-based Research-MAS 587 (3) Chicana Gender PerspectivesComplete 3 units from options below:-DNC 500 (3) Dance and Culture-BIOS 576A (3) Biostatistics in Public Health-PATH 515 (4) Mechanisms of Human Diseases |
| Internship, practicum, applied course requirements (Yes/No). If yes, provide description. |  | Yes. Students complete 1 unit of an internship or practicum in the field.  |
| Any double-dipping restrictions (Yes/No)? If yes, provide description.\*A maximum of 6 units may double-dip with a degree requirement (major, minor, General Education) or second certificate.  |  | Yes, students may apply 6 units towards major or minor.*Note: No more than 50% of the units of credit used to complete the certificate can also be used for a current degree requirement (i.e., major, minor, or General Education), second certificate, or previously awarded degree program.* |
| Additional requirements (provide description) |  | Students must complete oral examination administered by certificate committee members.  |

**GRADUATE CERTIFICATE** Requirements should include sufficient units to provide a substantive program and an appropriate level of academic rigor and in no case be less than 9 units of credit. Delete EXAMPLE column before submitting/uploading; if Undergraduate Certificate (above) does not apply, delete that table, as well.

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| Certificate level (graduate certificate or post-master’s certificate) |  | EXAMPLE Graduate certificate |
| Minimum total units required |  | 12 |
| Total transfer units that may apply to the certificate. *Note: If transfer work is allowed by the offering department, course work taken more than two years prior to admission to the certificate program may not be applied.* |  | 6 |
| Pre-admissions expectations (i.e., academic training to be completed prior to admission)  |  | Prior experience in the field; BS in related field |
| Graduate non-degree status units permitted? (Yes/No). If yes, list how many.  *Note: per policy, 6 units maximum may be used.* |  | Yes, 6 units may be used towards the certificate |
| Certificate requirements. List all certificate requirements including core and electives. Courses listed must include **course prefix, number, units, and title**. **Mark new coursework (New)**. Include any limits/restrictions needed. Provide email(s)/letter(s) of support from home department head(s) for courses not owned by your department. |  | Complete 9 units of core coursework:-ECOL 547 (3) Introduction to Theoretical Ecology-ARE 631 (3) Arts-based Research-MAS 587 (3) Chicana Gender PerspectivesComplete 3 units from options below:-DNC 500 (3) Dance and Culture-BIOS 576A (3) Biostatistics in Public Health-PATH 515 (4) Mechanisms of Human Diseases |
| Research methods, data analysis, and methodology requirements. (Yes/No). If yes, provide description. |  | No |
| Internship, practicum, applied course requirements (Yes/No). If yes, provide description. |  | Yes. Students complete 1 unit of an internship or practicum in the field.  |
| Is substitution of required or elective courses permitted at advisor’s discretion? (Yes/No). If yes, provide description. |  | Yes, students may substitute 3 units with program advisor approval.  |
| May units earned for the certificate be applied to affiliated graduate programs (from section II)? (Yes/No). If yes, list how many. *Note: There is no University maximum on the number of units from a certificate program that may also apply toward a UA degree program, subject to time limitations for degree programs.* |  | Yes, students may apply 9 units towards MA program. |
| Additional requirements (provide description) |  | Students must complete oral examination administered by certificate committee members.  |

1. **CURRENT COURSES**–using the table below, list all existing courses included in the proposed certificate. You can find information to complete the table using the [UA course catalog](https://uaccess.schedule.arizona.edu/psp/pubsaprd/UA_CATALOG/HRMS/h/?tab=DEFAULT)  or [UAnalytics](https://analytics.uaccess.arizona.edu/analytics/saw.dll?dashboard&PortalPath=%2Fshared%2FStudent%2F_portal%2FCatalog%20and%20Schedule) (Catalog and Schedule Dashboard> “Printable Course Descriptions by Department” On Demand Report; right side of screen). If the courses listed belong to a department that is not a signed party to this implementation request, upload the department head’s permission to include the courses in the proposed certificate and information regarding accessibility to and frequency of offerings for the course(s). Upload letters of support/emails from department heads to the “Letter(s) of Support” field on the UAccess workflow form. Add rows to the table, as needed. **New course proposals must be submitted via** [**UAccess Course Add forms**](https://uaccess.arizona.edu/) **following the procedures and deadlines detailed** [**here**](https://academicadmin.arizona.edu/courseapprovals)**.**

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| **Course prefix and number (include cross-listings)** | **Units** | **Title** | **Pre-requisites** | **Modes of Delivery (online, in-person, hybrid)** | **Campus and Location Offered** | **Dept signed party to proposal? (Yes/No)** |
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1. **Learning Outcomes** - Complete this table as a summary of the learning outcomes from your assessment plan, using these examples as a model. If you need assistance completing this table and/or the Curriculum Map, please see the resources at the [Office of Instruction and Assessment](https://assessresources.oia.arizona.edu/content/42) or contact them [here](https://oia.arizona.edu/contact).

MS inClinical Research

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| **Learning Outcome #1**: Students will demonstrate graduate-level proficiency in the design and conduct of clinical research within regulatory and ethical guidelines. |
| **Concepts**: Design of experiments and analytic approaches to clinical research, regulatory guidelines for clinical research, including institutional research boards, regulations and relevant laws related to human subjects testing. |
| **Competencies**: Students will demonstrate knowledge of the design and conduct of clinical research studies by exhibiting knowledge of clinical trial design, relevant statistical methods, relevant privacy laws, and human subjects protections. Students will demonstrate their ability to design experiments within regulatory and ethical guidelines by articulating a new clinical research study design, or by evaluating an existing (peer-reviewed) study. |
| **Learning Outcome #2**: Students will demonstrate their ability to utilize biomedical informatic functions and analyses at the graduate level in a clinical setting. |
| **Concepts**: Database design, data collection standards and processes, data safety, data utilization and analytic methods leveraging primary and secondary data in clinical research. |
| **Competencies**: Students will demonstrate their fundamental knowledge of database design and data collection, as well as their knowledge of emerging technologies such as electronic health records, administrative and regulatory datasets, biobanks, and research-specific data management systems in clinical research. |
| **Learning Outcome #** |
| **Concepts:** |
| **Competencies:** |
| **Learning Outcome #** |
| **Concepts:** |
| **Competencies:** |
| **Learning Outcome #** |
| **Concepts:** |
| **Competencies:** |

1. **CONTACTS AND ADMINISTRATION**

**UNDERGRADUATE** (delete if n/a)

a. List the name and contact information for the primary point of contact for the certificate:

b. List the name and contact information for the person or persons who will serve in the role of Director of Undergraduate Studies (DUS) for the certificate (this is not always the same as the DUS for affiliated programs or head of the managing academic unit.):

c. If known, list the members of the certificate oversight committee for this certificate. Note: undergraduate certificate oversight committees shall consist of a minimum of 3 members, 2 of which are faculty and at least one of the 2 is participating faculty in the certificate program. The oversight committee is responsible for 1) qualifications of participating faculty, 2) coordination of admissions recommendations with the Office of Admissions, and 3) curricular changes:

**GRADUATE** (delete if n/a)

a. List the name and contact information for the Admissions Contact:

b. List the name and contact information for the Graduate Program Coordinator:

c. List the name and contact information for the Director of Graduate Studies:

d. List the name and contact information for the Graduate College Degree Counselor:

1. **REQUIRED SIGNATURES**

Program Director/Main Proposer (print name and title):

Program Director/Main Proposer signature:

Date:

Department Head (print name and title):

Department Head’s signature:

Date:



Associate/Assistant Dean (print name):

Associate/Assistant Dean’s signature:

Date:



Dean (print name):

Dean’s signature:

Date:



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| For use by Curricular Affairs (Undergraduate):

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| Committee | Approval date |
| APS |  |
| Undergraduate Council |  |
| Undergraduate College Academic Administrators Council |  |

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For use by Curricular Affairs (Graduate):

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| Committee | Approval date |
| GPERC |  |
| Graduate College Academic Administrators Council |  |