

Tips for Combining Multiple Studies or Courses in One AUP

To help departments and faculty reduce regulatory burden associated with animal welfare compliance, the TAMU IACUC supports combining AUPs where possible. Combining AUPs is optional and not a requirement.

❖ **Situations ideal for combining AUPs:**

- PIs with multiple grants/studies/aims may combine these within one AUP provided the scope of work can be broadened to encompass all experiments/aims.
- Departments with multiple courses utilizing live animal subjects can combine teaching courses into one departmental teaching AUP (or a reduced number).
- Note: Amendments among multiple PIs/courses will require coordination and planning. Concurrent IACUC review of multiple amendments is not possible. The IACUC can only review one amendment at a time per AUP.

❖ **AUP Development tools:** Browse the TAMU IACUC Guidance page for these and other tools and guidance at: <https://vpr.tamu.edu/animals-in-research-and-teaching/texas-am-iacuc-guidance/> (Use your TAMU Net ID credentials):

- AWO-F-032 AUP Off-line Worksheet
- AWO-O-036 AUP Example Text - Procedure Flowchart Timeline
- AWO-O-069 AUP Tool - Experimental Design and Workflow
- AWO-O-072 AUP Tool - ERC Worksheet
- TAMU-C-008a Addendum - AUP Help Text* (continuous listing of all available AUP Help Text by section)
- TAMU-C-008b Addendum - Pain & Distress Categorization
- IRIS-M-004 How to Create a New Study [PI]
- IRIS-M-005 How to Copy a Study for AUP Renewal [PI]

*We highly recommend utilizing the Help Text available for many AUP sections! Help Text demonstrates IACUC expectations by providing clarifying details, examples, and in some cases customizable text for many AUP sections.

❖ **Tips for combining AUPs [IACUC Application (Animals) in iRIS]:**

AUP Section	Instructions
1.0 (Title)	Broaden the title to encompass multiple projects or courses.
3.0 (Personnel)	<ul style="list-style-type: none"> ❖ List personnel and define their roles. Personnel listed in section 3 must be included in section 6.1. ❖ Recommend listing the colony/herd managers as personnel individually/by name for access to the AUP in iRIS. ❖ For teaching AUPs: <ul style="list-style-type: none"> ➤ choose a main PI (can be a non-PI departmental representative with dept. head permission) ➤ list all course instructors as co-PIs ➤ list teaching assistants, etc. as participants
5.1 (Species)	❖ Select broad categories for species (mouse/rat/fish/wild small mammals, etc.). Do not list individual strains.
5.2 (Funding)	<ul style="list-style-type: none"> ❖ Enter sponsor(s). Include M# from Maestro. ❖ Note: Multiple funding sources are allowed on one AUP, however, we recommend that you keep any DOD/ACURO funded projects on a separate AUP to avoid delays caused by additional ACURO review times.

6.1 (Personnel)	<ul style="list-style-type: none"> ❖ List specific animal activities/procedures each person will perform and address training/experience with those activities and listed species (or training plan). Copy/paste examples provided in the Help Text and customize for each person listed. ❖ List personnel from core/service units such as CMP/VMP/CVM/ASTREC generically instead of individually. List which procedures will be performed by these personnel (i.e. daily monitoring, blood collection, euthanasia, etc.).
Note	<p>AUP section numbers may vary depending upon selections made in section 5.4 Project Activities.</p>
7.1 (Lay Summary)	<ul style="list-style-type: none"> ❖ The lay summary should be broad enough to encompass the multiple projects and should not contain acronyms or scientific jargon.
7.4 (Number Justification)	<ul style="list-style-type: none"> ❖ Describe statistical method or cite references to justify number of animals/group for each study/aim/class. ❖ Describe statistical method or cite references. ❖ For teaching protocols: Indicate the course/aim and the group size. Animal numbers should be justified by a specified student-to-animal ratio (e.g., “each animal will handled by a maximum of 4 students. There are less than 20 students every semester and the class will be taught 3 times during the protocol approval [n=20/4x3=15]”) ❖ Total should match that in sections 5.1 and 9.1.
7.5 (Experimental Design)	<ul style="list-style-type: none"> ❖ For combining multiple projects and sub-aims, use a numbering system, “Experiment 1.1, 1.2...Experiment 2.1, 2.2,...” etc. ❖ For combining multiple courses in one teaching AUP, identify each course by TAMU course number, “Course 1: ANSC 108...Course 2: ANSC 406” etc. ❖ Use the same numbering system to separate/identify project differences regarding procedures, side effects, monitoring, & removal criteria in subsequent AUP sections. ❖ See Help Text for this section, AWO-F-032 AUP Off-line Worksheet, and AWO-O-069 AUP Tool - Experimental Design and Workflow
7.5 (Experimental Design - Timeline)	<ul style="list-style-type: none"> ❖ For each course or study, provide a timeline/sequential list of animal procedures <u>beginning with acquisition and ending with euthanasia/final disposition</u> and including intervals/rest time between procedures. This provides the IACUC with an overview of the cumulative animal experience which is key to assessing animal welfare. See AUP Help Text and AUP Experimental Design and Timeline tools.
7.6 (Procedures)	<ul style="list-style-type: none"> ❖ Add procedure descriptions/details including limits (max number of times performed on one animal and how often). ❖ Include husbandry practices, vaccinations, parasite monitoring, de-worming, etc. if not provided by CMP or other animal facility service unit. ❖ Don’t forget simple procedures such as breeding scheme, ID, genotyping, and enrichment provided if not covered by another AUP. ❖ For wild animal capture explain how you will handle unintended/by-catch and how often traps will be checked. Will food & water be provided in unattended traps? ❖ Describe monitoring and supports for <u>non-surgical</u> anesthetic events (length of anesthesia, induction/delivery, maintenance, eye lube, thermoregulatory support, assessment of anesthetic depth, and recovery). <u>Surgical</u> anesthesia descriptions are prompted in the surgical section. ❖ See Help Text for the type of information needed for several common procedures.
7.6 (Procedures table)	<ul style="list-style-type: none"> ❖ For teaching AUPs, using the numbering system established in 7.5, list the location of course-specific procedures (procedure names only in last column; multiple procedures listed in one line per location); Ex: “Course 1 – ID, breeding, genotyping, injections”; “Course 2 – Surgery, euthanasia”, etc.
7.7 (Blood/samples)	<ul style="list-style-type: none"> ❖ In the Type of Sample column, use the numbering system established in 7.5 to list samples taken for each study/course (e.g. “1 – Blood” ... “2 – Tail snip” etc.)

	<ul style="list-style-type: none"> ❖ Add flexibility by using ranges or phrases such as “up to X mL” and “not more often than X times/week”. ❖ See TAMU-G-017 IACUC Guidelines on Blood Collection for more information regarding acceptable quantity and frequency of blood sampling in rodents and other species as well as guidelines for specific methods of blood collection.
7.8 (Clinical Signs)	<ul style="list-style-type: none"> ❖ Use the established numbering system from 7.5 to identify study/course specific signs or symptoms that may be expected from the procedures performed. Include effects of even simple procedures. Ex: bleeding/bruising from blood collection and injections. ❖ Note: The more robust this section, the less likely you’ll need to report an <i>unanticipated</i> adverse event (you’re not expected to report an event which you anticipated and listed in the AUP as a possibility). ❖ Mortality rates can also be included if death is a possible risk. ❖ For wild animal/field studies: <ul style="list-style-type: none"> ➤ What are the possible pathogen concerns for species/location/country? ➤ Describe plan for mitigation of pathogen spread, animal to human as well as reverse
7.9 (Monitoring)	<ul style="list-style-type: none"> ❖ Using the established study/course numbering system from 7.5, include a list of observable signs that will be monitored as well as how often monitoring will occur. Ex: If weight loss or tumor size is monitored, how often are animals weighed/measured? ❖ If body condition or other scoring system is used, include chart.
7.10 (Removal criteria)	<ul style="list-style-type: none"> ❖ Using the established study/course numbering system from 7.5, describe the plan and observable signs for which you will provide veterinary care, halt or remove from the study, or humanely euthanize animals. ❖ If a removal scoring system is used, define scores at which animals will be referred to veterinarian, treated, removed from study, or euthanized. ❖ For AUPs utilizing TAMU departmental or teaching colonies/herds, recommend a statement that the colony/herd manager will monitor health records and assign animals to teaching activities to prevent over-use. Colony/herd manager should be listed as personnel in 6.1 for access to the AUP. ❖ See TAMU-G-001 Guidelines on Choosing Appropriate Endpoints, AUP Help Text, AWO-F-032 AUP Off-line Worksheet, and AWO-O-072 AUP Tool - ERC Worksheet for more information on early removal criteria (ERC).
8.1 (Drugs/Agents)	<ul style="list-style-type: none"> ❖ List all substances administered to animals including peri-operative substances such as eye lube, supplemental fluids, anesthesia/analgesia, and pre-emptive analgesia. ❖ Using the study/course specific number system established in 7.5, indicate in the Agent column for which study/course each agent is associated. Ex: “1 – Drug A”... “1,2,3 – Drug B”, etc.
9.1 (Pain & Distress)	<ul style="list-style-type: none"> ❖ For each species listed in 5.1, indicate the number of animals in each pain & distress category. ❖ See TAMU-C-008b Addendum - Pain & Distress Categorization for category examples.
9.2 (Alternatives Search)	<ul style="list-style-type: none"> ❖ Using the study/course specific numbering system established in 7.5, complete all fields for category D & E procedures. ❖ The Animal Welfare Information Center may be able to provide assistance with alternatives searching and addressing the 3Rs. https://www.nal.usda.gov/awic
9.3 or 9.4 (Non-drug relief measures for category D or E)	<ul style="list-style-type: none"> ❖ Using the study/course specific numbering system established in 7.5, describe <u>non-anesthesia/analgesia</u> relief measures such as positive interaction with care staff, softened food on floor, crinkle paper & huts for mice; structures for goats to climb; substrate or hiding structures for fish, etc.
9.5 (Euthanasia)	<ul style="list-style-type: none"> ❖ Describe the planned and emergency euthanasia methods for each species. ❖ Recommend including multiple euthanasia methods to maximize flexibility (e.g. “CO2 asphyxia + physical secondary method”; “Anesthesia + physical secondary method”, etc.)



	<ul style="list-style-type: none"> ❖ See the following IACUC euthanasia guidance documents for more information: TAMU-G-025 Guidelines on Physical Methods of Euthanasia in Warm Blooded Species, TAMU-G-028 Guidelines on Euthanasia Using Carbon Dioxide, TAMU-G-047 Guidelines on Inhaled and Non-inhaled Agents of Euthanasia, TAMU-G-048 Euthanasia of Fish Amphibians and Reptiles
10.2 (Housing location table)	<ul style="list-style-type: none"> ❖ List housing locations for each species <i>unless</i> animals are housed under another (home/facility) AUP.
10.3 (Husbandry Requirements)	<ul style="list-style-type: none"> ❖ Select applicable husbandry options <i>unless</i> animals are housed under another (home/facility) AUP. ❖ For special husbandry and other exceptions, indicate in the description fields to which studies/courses each selection applies (using the numbering system established in 7.5). ❖ Include the monitoring plan for animals while under each restriction/exception.
11-12 (Non-survival/Survival Surgery)	<ul style="list-style-type: none"> ❖ 11.2/12.2: Check the box for pre-operative assessment & care (determine that animals are healthy before surgery). ❖ 12. 2: For survival surgery check the box for pre-emptive analgesia or provide scientific justification for not providing. See TAMU-G-002 Guidelines on the use of Anesthesia and Analgesia. ❖ 11.3/12.3: <ul style="list-style-type: none"> ➢ Describe surgical procedures including the anesthesia protocol. ➢ Address when suture/staples are removed. Are they removed under sedation? ❖ 11.4/12.4: Select the planned assessments for adequate anesthesia, physiological supports during surgery/recovery, and aseptic practices. ❖ 12.6: Select and describe applicable post-op monitoring practices and potential post-op complications. ❖ Other documents applicable to surgery: TAMU-G-003 Guidelines for the Safe Use of Inhalant Anesthetics, TAMU-G-003 Guidelines for the Safe Use of Inhalant Anesthetics, TAMU-G-018 Guidelines for Performing Surgical Procedures in Non-Rodent Mammals, TAMU-G-022 Guideline for Non-survival Surgery, TAMU-G-049 Guidelines for Performing Surgery in Amphibians and Reptiles

For assistance or questions regarding AUP sections not listed in this document, contact the Animal Welfare Office at 979.845.1828 or animalcompliance@tamu.edu . One-on-one virtual sessions with iRIS screen share can also be arranged.