Practica Descriptions – Updated November 2014

All three practica projects are required for Scholars and MSCS students.
The research project, manuscript, and grant application must be related to the same research question.

Research Project
The Research Project is a hands-on research training experience. Depending on the trainee’s prior research experience, it may serve as an introduction to clinical or translational research practices, or as an advanced experience as a PI to oversee a multidisciplinary research team. The study should examine an important clinical and/or translational question, and the goal is to obtain interpretable data that can advance the field and the trainee’s academic career. The trainee should be actively involved in the analysis of data, protocol development/gaining IRB approval/accrual of patients as applicable in order to gain a breadth and depth of experience. The trainee should be involved in presenting data at meetings and publish papers when appropriate. The project will lay the foundation for the publishable manuscript and the extramural grant application. Early and frequent consultation with a multidisciplinary team is strongly recommended.

• Product: The Research Project Report should be submitted electronically to CTMeducation@UTSouthwestern.edu using the Research Project Report Form. In this report the trainee will summarize his/her work on the project. Additionally, the trainee’s scientific mentor must attest to his/her approval of the project using the Mentor Approval Form. After both forms are received, they will be assigned to the Center for Translational Medicine’s (CTM) Career Development Committee (CDC) for evaluation and approval.

• Evaluation:
  o Trainee’s role is appropriate for his/her training goals.
  o Trainee’s personal training goals are well defined and achieved.
  o Trainee clearly describes the overall objectives of the research, the background, specific aims, significance, and innovation.
  o Trainee documents how the specific aims will be accomplished. Research design, study population, data collection procedures/instruments, key variables, and analytic plan are fully described and justified.
  o Data are rigorously analyzed and support the conclusions made. If appropriate, data are effectively illustrated by tables, figures and graphs.
  o The references cited are substantial and up to date. These should include key papers from respected/well-known authors in the field.
  o Submitted documents are written in clear, concise language and free of errors in formatting, grammar and spelling.

• What is NOT Acceptable: data/project published before start of program; chart reviews or case reports

Publishable Manuscript
The trainee will write and submit a manuscript for publication (as first author) describing the findings of the research project. In an effort to establish himself/herself as an expert in the field, the trainee should discuss current knowledge and provide unique insights. The trainee is expected to cite related literature and raise specific questions that need to be addressed in future research. The manuscript must be related to the research project (above) and address primary data. In the event that in spite of excellent research effort, the data are not suitable for publication, then a critical literature review in a manuscript format on the topic of research may be submitted in lieu of a primary research manuscript (with approval).

• Product: the manuscript should be submitted electronically to CTMeducation@UTSouthwestern.edu. Additionally, the trainee’s scientific mentor must attest to his/her approval of the manuscript using the Mentor Approval Form. After both items are received, they will be assigned to the CTM Career Development Committee (CDC) for evaluation and approval.

• Evaluation:
  o Submitted manuscript is of publishable quality.
  o Topic of the manuscript is presented in clear, concise language and relates directly back to the Research Project.
  o Trainee explains the importance of the topic and its potential impact.
  o Confirmation by the scientific mentor as to which journal(s) the manuscript will be submitted.
  o Demonstrates critical thinking and writing; for example, identifying strengths and weaknesses, gaps in the literature/science, and proposed future directions of research.

• What is NOT Acceptable: general reviews or surveys; work that doesn’t connect back to the Research Project.
EXTRAMURAL RESEARCH GRANT APPLICATION
As the capstone to the program, the trainee writes and turns in a complete and submitted extramural grant application. In the majority of cases, the trainee will submit a NIH career development grant (NIH K23, K08) or equivalent foundation grant. In some cases, the trainee may submit a R21, R01 or equivalent independent grant. If planning to submit a grant to other agencies, the trainee should seek approval by the Career Development Committee in advance. The research grant proposal will use standard NIH forms (or similar forms for foundation-based awards). The research proposal should be based on the trainee’s prior research (project and manuscript(s) must form the background and significance of the proposal). The grant application will be developed with the close advice and guidance of the trainee’s mentor(s) and multidisciplinary team.

- **Product:** the complete grant application, including all required components, should be submitted electronically to CTMeducation@UTSouthwestern.edu. Additionally, the trainee’s scientific mentor must attest to his/her approval of the application using the Mentor Approval Form. After both items are received, they will be assigned to the CTM Career Development Committee (CDC) for evaluation and approval. The official email confirmation indicating the grant has been submitted to the funding agency or the UT Southwestern Sponsored Programs Administration office must be forwarded to the above email address before the grant will be approved for academic credit.

- **Evaluation:**
  - Funding agency and grant mechanism are appropriate for the proposed research.
  - A description of how the award will aid the trainee in accomplishing his/her career goals (both short- and long-term) is provided.
  - Mentoring team includes experienced, independent clinicians and scientists. Mentors have external research grant support and a record of mentoring early career investigators.
  - Trainee documents the department chair/division chief/institution’s commitment to the proposed research and career development plan (if applicable). This includes protected research time and access to resources such as laboratory/office space and office equipment.
  - If applicable, the career development plan sets specific goals for the acquisition of key skills/knowledge. Goals are attainable through research experience and productivity, formal training (didactic courses), and mentoring relationships. A system for monitoring progress is established.
  - Trainee documents the overall objectives of the proposed research in the Specific Aims section with detailed information on primary and secondary aims.
  - The significance and innovation sections describe the scope and merit of the proposed research. If appropriate, data are effectively illustrated by tables, figures and graphs.
  - The research methods section details how the specific aims of the proposed research will be accomplished. Research design, study population, data collection procedures/instruments, key variables, and analysis plans are fully described and justified.
  - The literature cited is recent, comprehensive for the field of study and cites key papers from respected/well-known authors in the scientific community.
  - Data are relevant and properly analyzed. Tables, figures and graphs are effectively used to illustrate results.
  - Report is written in clear, concise language with no errors in grammar or spelling. Application meets formatting requirements for submission to the funding agency.
  - The application relates directly back to the Research Project and Publishable Manuscript.

- **What is NOT Acceptable:** research proposals for pilot projects (including Children’s, or other internal mechanisms); industry-sponsored trials; IRB protocol; any grant that is less than 20% effort for 24 months; institutional grant.

**Assistance for Writing Grants**
1. It is highly recommended (but not required) that the trainee submits a complete grant application to the Center for Translational Medicine Internal Grant Application Review Committee, which is comprised of clinical and translational scientists. The Committee will critically evaluate the plan’s merit based on criteria similar in rigor to that used for the NIH peer-review process. After examining the grant, the Committee will meet with the trainee to provide criticisms and suggestions for revision and modification of all elements of the grant application. The scientific mentor is required to be present at this meeting for K-level applications. Based on this feedback, the trainee should revise the proposed plan to address the issues raised by the committee.

2. The Center for Translational Medicine typically offers an intensive grant writing workshop in advance of each NIH submission deadline. For more details, contact CTMeducation@UTSouthwestern.edu.

**EXAMPLES**
Please visit our website and/or contact CTMeducation@UTSouthwestern.edu to obtain examples of successful applications.
## Typical timeline for KL2/Clinical & Translational Scholars

The research project, manuscript, and grant application should all be focused on the same research question/project.

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<th>Year One</th>
<th>Year Two</th>
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<tr>
<td>Research Project&lt;br&gt;(Complete by 12th month)</td>
<td>Ongoing Research Activities</td>
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<tr>
<td>Publishable Manuscript&lt;br&gt;(Complete by 15th month)</td>
<td>Extramural Research Grant Application&lt;br&gt;(Complete by 21&lt;sup&gt;st&lt;/sup&gt; - 24&lt;sup&gt;th&lt;/sup&gt; month)</td>
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## Typical timeline for general master’s degree seeking students

The research project, manuscript, and grant application should all be focused on the same research question/project.

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<th>Year One</th>
<th>Year Two</th>
<th>Year Three</th>
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<tr>
<td>Research Project&lt;br&gt;(Complete by 12th month)</td>
<td>Ongoing Research Activities</td>
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<tr>
<td>Publishable Manuscript&lt;br&gt;(Complete by 18th month)</td>
<td>Extramural Research Grant Application&lt;br&gt;(Complete by 24&lt;sup&gt;th&lt;/sup&gt; – 32&lt;sup&gt;nd&lt;/sup&gt; month)</td>
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