NUTS AND BOLTS of submitting a EURECA proposal
enhancing undergraduate research & creative activities
Overview
Fostering Student-Faculty Partnerships
Proposals Types

• Initiated by
  – Undergraduates
  – Faculty
Proposal Structure

• Fillable
• 1st page
  – General information
    • For Faculty Mentor Proposals Only
    • For Undergraduate Proposals Only

Note:
Before you get down to the proposal details, you must assume that the reader knows nothing about the project. Thus, you must be explicit and to the point.
Proposal Structure

• 1st page

EURECA
Enhancing Undergraduate Research Endeavors and Creative Activities

Faculty Proposal Application

Title of the Proposed Project:

This project is ☐ New ☐ Continuing EURECA

This project will be conducted during the
Fall Only ☐ Spring Only ☐ One Academic Year

Faculty mentor(s) name: ____

College: ☐ DCOBA ☐ EDUC ☐ COFA ☐ GHSHS ☐ PYHSS ☐ MCSME
Department: ____

Email address: ____

Phone Number: ____ Alternate phone number: ____

Name, M#, classification, department, both major and overall GPA, phone number and e-mail address of up to two students whom you will mentor (copy format for multiple mentees).

Name: ____ M number: ____

College: ☐ DCOBA ☐ WCOE ☐ COFA ☐ GHSHS ☐ PYHSS ☐ MCSME
Department: ____

Email address: ____

Phone Number: ____ Alternate phone number: ____

Classification (check one): ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior

Major GPA ______ Overall GPA ______ N/A ______
I. **Summary:** Briefly discuss the **purpose** and **aims** of the project. Please use narrative suitable for a reader outside your area of expertise. (Please use the space provided below – 250 words.)

- **Purpose**
  - gap in the knowledge
  - resolve a conflict in the literature
  - offer a new perspective

- **Aims (general)**
  - Objectives (specific)

- **A sentence or two on methodology/approach**

- **Expected outcomes**

Recommendation: write last
II. **Introduction:**

- Describe and properly reference the background and context of the project.
  - What others have done
  - Comes from reading the existent published literature
- State the question(s) to be addressed in the project objectives.
- Hypothesis
- 500 words
III. Preliminary results/findings/progress:

- If proposed project is a continuing EURECA project, describe accomplishments from the previous funding period. (Please use the space provided below - 300 words.)

- 300 words
IV. **Methods/Approaches**

- Describes briefly the project’s experimental design or creative approach
- How you are going to answer the question
- Tools
- 400 words
IV. Methods/Approaches

A few approaches are going to be applied in tackling this problem. The main approach we are taking is using programmable logic controllers (PLC). There will also be concepts derived from IoT (Internet of things).

Programmable logic controllers are computer systems that monitor the states of different physical conditions and make calculate decisions based on the input conditions. In simple terms, Smart sensors were placed in spots to monitor vehicle presence. The sensors were built using: microcontrollers for computation, ultrasonic, & PIR sensors for detection and a GSM shield for sending information. All of these are computed & sent to a cloud server as input, which in turn out puts it to the application end for users. The concept of Internet of things what will be derived is connecting the sensors sending the data (available or occupied) over a server to applications for users to see.

The hardware and software components of this project will be created collectively and then integrated to give the end result. A bulk of the hardware will be created and tested using designing programs like solid works for the mechanical designs and circuit works for electrical aspects. The software, which is the cellphone and web application, will be developed for both Android and IOS operating systems. This will be done on one interface called phone gap. Phone gap uses the same code to create identical applications for both systems.

The hardware portion, mostly electrical, will be conducted under the project mentor Dr. Guo’s supervision. He has broad knowledge in Programmable logic controls and IoT applications. There will also be backing for the software end from the school’s IT department, the Webmaster Mr. Matt Shirey, and a Computer Science Professor, Dr. Terry Griffin. So far, they have been very resourceful in coming up with ways to go about solving the few problems we have run into.

At the end of all this, a working prototype will be created to light a definite path for other phases of the project to follow including campus wide implementation.
Project Proposal

V. Expected Results/Outcomes
   – Anticipated results or findings
   – 300 words
Project Proposal

VI. References or Literature Cited
   – Give credit to where credit is due
   – Use the American Psychological Association (APA) style
   – Maximum 10
Project Proposal

VII. Time Commitment to the Project:

– Description of the specific role of the student in the project.

– Estimated hours per week the student will be working on the proposed project.

– Occurrence of scheduled meetings dedicated to research discussion and work with Faculty/mentees
  • meetings should coincide with Timeline progress.

– 200 words
Project Proposal

VIII. Timeline:
- Concise project timeline
- 200 words
- Will work:
  - Table
  - Timeline graph

<table>
<thead>
<tr>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish assembly of</td>
<td>Tune and modify apparatus with goal of</td>
<td>Further tune apparatus and begin modifying</td>
<td>Compile results/ theoretical model in a paper</td>
</tr>
<tr>
<td>experimental apparatus</td>
<td>generating SBSL</td>
<td>parameters</td>
<td></td>
</tr>
</tbody>
</table>
IX. Budget

Estimated budgetary needs

- Up to $500 to support the objectives and outcomes of the proposed project
  - small equipment
  - services
  - software
  - shipping & handling estimates

  **Must submit a Project Request for items needed with links.**

- Up to $500 to defray **student travel**
  - First Come, First Serve basis
    - registration fees
    - abstract submission cost
    - estimated transportation/airfare
    - lodging and meals per intended conference

  **Must submit a Request for Travel Authorization (RTA).**

All of these forms are located on our webpage:

[www.msutexas.edu/eureca](http://www.msutexas.edu/eureca)
<table>
<thead>
<tr>
<th>Materials and Supplies</th>
<th>$</th>
<th>Estimated Travel</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Registration</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lodging</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meals* (use Per Diem rate)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Materials and supplies total</td>
<td></td>
<td>Student travel total</td>
<td></td>
</tr>
<tr>
<td>Grand total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Budget justification

• Explain for each item the:
  – Why
  – How
[Insert signed commitments here]

- Faculty commitment(s)
- Student commitment(s)

Mentor Commitment to the Project

I, Sarah Quintana, hereby certify I have read the proposal entitled “The Impact of Poverty and Race on Access to Quality Hospitals,” and I will commit time to working on the project as a mentor of Eung Forde and Breidy Encarnacion. My teaching schedule with specific times to mentor and work with the student is included in the proposal. I understand and will meet the following expectations:

- Attend all planned EURECA workshops, presentations, forums, and faculty meetings called by the UGR Office Director
- Attend monthly student meetings as scheduled
- Contribute to Creative Inquiry: Interdisciplinary Thinking course
- Actively engage with your student mentee(s) to execute your research project as proposed
- Submit a short progress report on behalf of your mentee(s) by a designated date
- Submit an abstract to present results of your project jointly with your student mentee(s) at a professional society meeting, if the opportunity arises
- Attend the Undergraduate Research and Creative Activity Forum
- Engage in activities promoting the EURECA program
- Assist in the evaluation of the EURECA program
- Write a report on the outcomes of the project by the end of the semester

Signature: __________________________
Date: 6/7/2020

Student Commitment to the Project

I, Diana Daniel, hereby certify I have read the proposal entitled “Utilizing Membrane Protein Chaperone as a Treatment to Ameliorate Tau Protein Aggregation.” I will commit time to working on the project as a mentee of Hao-Cheng George Liang. My class schedule with specific times to work on the project is included in the proposal. I understand and will meet the following expectations:

- Enroll in no more than 15 credit semester hours (excluding MWSU 203/4000).
- Enroll and successfully complete Creative Inquiry: Interdisciplinary Thinking (either MWSU 203 or MWSU 4000) (please refer to the class schedule for class times).
- Attend all planned EURECA workshops, presentations, and forums.
- Attend monthly meetings as scheduled.
- Work diligently with your faculty and/or graduate student mentor(s) to complete your research project in a timely fashion.
- Present results of your project in the Undergraduate Research and Creative Activity Forum.
- Work with your faculty and/or graduate student mentor to submit at least one abstract to present results of your project at a professional society, if opportunities arise.
- Engage in activities promoting the EURECA program.
- Participate in the assessment of the EURECA program.
- Write a report of the project results by the end of the semester. Include a paragraph or two describing reflections on your EURECA experience at the end of the report.

By signing below, I further agree to repay in full all funds paid out on my behalf while participating in the EURECA scholarship program in the event that I am unable to complete or meet the requirements of the program including: scholarship stipend, project supplies and materials expenses, travel expenses, airfare/transportation, registration fees, and or lodging and meals. I agree to comply with MSU policies of Student Conduct while attending all EURECA events or conferences at which I am representing MSU and EURECA.

Signature: __________________________
Date: 06/01/2020
Review Process

- Faculty volunteers
# EURECA Project Review Rubric

## Title:

## Proposer Name(s):

<table>
<thead>
<tr>
<th>Category</th>
<th>Outstanding (4)</th>
<th>Good (3)</th>
<th>Fair (2)</th>
<th>Unacceptable (0)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>Clearly defined. Aims listed and clearly outlined.</td>
<td>Needs to be clearer and/or missing minor information. Aims listed and reasonable.</td>
<td>Unclear. Aims are reasonable.</td>
<td>Unclear. Aim(s) missing or unclear.</td>
<td></td>
</tr>
<tr>
<td><strong>Introduction</strong></td>
<td>Project is excellently framed. Background and context are clear. Questions &amp; objectives are clearly stated.</td>
<td>Project is well framed. Adequate background and context. Questions &amp; objectives are stated.</td>
<td>Project not framed well. Inadequate background and context. Some objectives are partly connected to the aim.</td>
<td>Poorly framed with no clear context. Objectives are missing or not connected to the aim.</td>
<td></td>
</tr>
<tr>
<td><strong>Methods/Approaches</strong></td>
<td>Clearly described. Appropriate and innovative.</td>
<td>Good description but lacks some detail. Appropriate and interesting.</td>
<td>Description unclear or incomplete. Appropriate &amp; acceptable.</td>
<td>Not described or inappropriate.</td>
<td></td>
</tr>
<tr>
<td><strong>Expected Results/Outcomes</strong></td>
<td>Clearly described. Clearly linked into the broader scholarly field.</td>
<td>Outlined, but lacks detail. Clearly linked into the broader scholarly field.</td>
<td>Not clearly described. A link is made to broader scholarly field.</td>
<td>Not described. Link to broader field is unclear or unstated.</td>
<td></td>
</tr>
<tr>
<td><strong>Student Involvement</strong></td>
<td>Student role is clearly described. Work is clearly student-oriented; students actively involved in the process (not merely observing or carrying out menial tasks)</td>
<td>Student role is mostly clearly. Students have a central role in the project, though creative/design input is limited.</td>
<td>Student role is unclear; raised more questions. Students mostly observers.</td>
<td>Student role not defined. Students as bystanders or role of mentor superficially presented.</td>
<td></td>
</tr>
<tr>
<td><strong>Faculty/Student Time Commitment</strong></td>
<td>Appropriate time commitment. Student role clearly described. Detailed time for student-mentor meeting included as well as specific times to work on the project.</td>
<td>Appropriate time commitment. Student role described. Time for student-mentor meeting included.</td>
<td>The weekly allotted time is insufficient to achieve the proposed objectives.</td>
<td>Unreasonable time commitment.</td>
<td></td>
</tr>
<tr>
<td><strong>Timeline</strong></td>
<td>Appropriate and described in detail.</td>
<td>Appropriate and reasonable.</td>
<td>Too general. Lacks details</td>
<td>Inappropriate or missing.</td>
<td></td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>Budget appears reasonable and complete. It provides justifications for stated needs.</td>
<td>Budget appears reasonable and complete, but lacks justification for one or more stated needs.</td>
<td>Budget appears incomplete or unreasonable for the project.</td>
<td>Circle one: Budget is missing. (0) Budget neither required nor deemed necessary (not budget; NB)</td>
<td></td>
</tr>
</tbody>
</table>

**Total Points**: /32
Please use the space provided to briefly comment on the strengths and weaknesses of the project or creative activity. Keep in mind that the direct beneficiary of the experience must be the student or students.

Strengths:

Weaknesses:

Reviewed by: ______________________________  Date: __________________
Submission Deadlines

• Spring Projects- December 1\textsuperscript{st}
  • New must check Spring Only
    • Cannot carry forward from Spring to Fall due to fiscal funding allocations. Reapply for Fall.
    • Continuations from Fall to Spring, not previously noted as AY will need to document need for continuation.
      • Examples: a delay in IRB approval resulting in not enough time to get thorough or complete test subject response, not enough test subject response, complications with or equipment/test sample failure.
  • Fall Only or Full Academic Year Projects- June 1\textsuperscript{st}