

# Appropriations Project Request - Fiscal Year 2020-21

## For projects meeting the Definition of House Rule 5.14

1. Title of Project: University of Central Florida - Limbitless Solutions
2. Date of Submission: 11/15/2019
3. House Member Sponsor: Anna Eskamani  
Members Copied:

### 4. DETAILS OF AMOUNT REQUESTED:

- a. Has funding been provided in a previous state budget for this activity? No  
***If answer to 4a is "No" skip 4b and 4c and proceed to 4d, Col. E***
- b. What is the most recent fiscal year the project was funded?
- c. Were the funds provided in the most recent fiscal year subsequently vetoed?
- d. Complete the following Project Request Worksheet to develop your request:

FY:	Input Prior Year Appropriation for this project for FY 2019-20 <i>(If appropriated in 2019-20 enter the appropriated amount, even if vetoed.)</i>			Develop New Funds Request for FY 2020-21 <i>(Requests for additional RECURRING funds are prohibited.)</i>		
Column:	A	B	C	D	E	F
Funds Description:	Prior Year Recurring Funds	Prior Year Nonrecurring Funds	Total Funds Appropriated  <i>(Recurring plus Nonrecurring: column A + column B)</i>	Recurring Base Budget  <i>(Will equal non-vetoed amounts provided in Column A)</i>	<b>Additional Nonrecurring Request</b>	<b>TOTAL Nonrecurring plus Recurring Base Funds</b>  <i>(Will equal the amount from the Recurring base in Column D plus the Additional Nonrecurring Request in Column E.)</i>
Input Amounts:					757,550	757,550

5. Are funds for this issue requested in a state agency's Legislative Budget Request submitted for FY 2020-21? No
  - 5a. If yes, which state agency?
  - 5b. If no, which is the most appropriate state agency to place an appropriation for the issue being requested? Department of Education
  - 5c. Has the appropriate state agency for administering the funding, if the request were appropriated, been contacted? Yes
  - 5d. Describe penalties for failing to meet deliverables or performance measures which the agency should provide in its contract to administer the funding if appropriated.  
Loss or Reversion of state funds

6. Requester:

- a. Name: Albert Manero
- b. Organization: University of Central Florida
- c. Email: albert@Limbitless-Solutions.org
- d. Phone #: (407)279-0790

7. Contact for questions about specific technical or financial details about the project:

- a. Name: Albert Manero
- b. Organization: University of Central Florida
- c. Email: albert@Limbitless-Solutions.org
- d. Phone #: (407)279-0790

8. Is there a registered lobbyist working to secure funding for this project?

- a. Name: Janet Owen
- b. Firm: University of Central Florida
- c. Email: janet.owen@UCF.edu
- d. Phone #: (407)823-3733

9. Organization or Name of entity receiving funds:

- a. Name: University of Central Florida
- b. County (County where funds are to be expended): Orange
- c. Service Area (Counties being served by the service(s) provided with funding): Statewide

10. What type of organization is the entity that will receive the funds? (Select one)

- For Profit
- Non Profit 501(c) (3)
- Non Profit 501(c) (4)
- Local Government
- University or College
- Other (Please describe)

11. What is the specific purpose or goal that will be achieved by the funds being requested?

To advance the research and development of the multi-gesture bionic limb for both pediatric and adult populations, including veterans and first-responders. Advanced manufacturing techniques will enable more robust and effective systems. The research and development will translate to a clinical trial to evaluate the usability and quality of life impacts for pediatric patients as well as adults, veterans and first responders who have suffered traumatic amputations.

12. Provide specific details on how funds will be spent. (Select all that apply)

Spending Category	Description	Nonrecurring (Should equal 4d, Col. E) Enter "0" if request is zero for the category
Administrative Costs:		
<input type="checkbox"/> a. Executive Director/Project Head Salary and Benefits		
<input type="checkbox"/> b. Other Salary and Benefits		
<input type="checkbox"/> c. Expense/Equipment/Travel/Supplies/Other		
<input type="checkbox"/> d. Consultants/Contracted Services/Study		
Operational Costs:		
<input type="checkbox"/> e. Salaries and Benefits		
<input checked="" type="checkbox"/> f. Expenses/Equipment/Travel/Supplies/Other	Equipment, hardware, and tools used in the development, design, manufacturing and testing of multi-gesture bionic limb for both pediatric and adult populations.	557,550
<input checked="" type="checkbox"/> g. Consultants/Contracted Services/Study	Undergraduate student program: a total of 20 students will work in the fields of simulation and training, video game design, art design, psychology, mechanical engineering and software	200,000

	engineering. (\$10 per hour, 20 hours per week, 50 weeks per year)	
Fixed Capital Construction/Major Renovation:		
<input type="checkbox"/> h. Construction/Renovation/Land/Planning Engineering		
<b>TOTAL</b>		<b>757,550</b>

13. For the Fixed Capital Costs requested with this issue (In Question 12, category “h. Fixed Capital Outlay” was selected), what type of ownership will the facility be under when complete? (Select one correct option)

- For Profit
- Non Profit 501(c) (3)
- Non Profit 501(c) (4)
- Local Government (e.g., police, fire or local government buildings, local roads, etc.)
- State agency owned facility (For example: college or university facility, buildings for public schools, roads in the state transportation system, etc.)
- Other (Please describe)

14. Is the project request an information technology project?

No

15. Is there any documented show of support for the requested project in the community including public hearings, letters of support, major organizational backing, or other expressions of support?

Yes

15a. Please Describe:

In May 2018, Limbitless entered its first clinical trials-the first 3D-printed prosthetics trial for children in the United States. The trials focuses on 20 children, ages 6-17, who will receive a Limbitless arm. In June 2019 Limbitless launched a clinical trial in collaboration with Mayo Clinic. Major organizational backing from the United Nations,

16. Has the need for the funds been documented by a study, completed by an independent 3rd party, for the area to be served?

Yes

16a. Please Describe:

In 2005, an estimated 1.6 million people in the US had a limb difference: 541,000 people had an upper-arm limb difference. This value was projected to double by 2050. Adams, cdc.gov, Ziegler-Graham, sciencedirect.com

17. Will the requested funds be used directly for services to citizens?

Yes

17a. What are the activities and services that will be provided to meet the purpose of the funds?

Development, design and distribution of the multi-gesture bionic limb for both pediatric and adult populations, including veterans and first-responders.

17b. Describe the direct services to be provided to the citizens by the funding requested.

Designing for production scalability, manufacturing hardware is requested for upwards of 250 pediatric bionic limbs and 250 adult bionic limbs to be distributed through clinical trials. Supporting the training of the device in a low stress environment will add capacity for patients with acute stress or post traumatic stress conditions.

17c. Describe the target population to be served (i.e., "the majority of the funds requested will serve these target populations or groups.").

Select all that apply to the target population:

- Elderly persons
- Persons with poor mental health
- Persons with poor physical health
- Jobless persons
- Economically disadvantaged persons
- At-risk youth
- Homeless
- Developmentally disabled
- Physically disabled
- Drug users (in health services)
- Preschool students
- Grade school students
- High school students
- University/college students
- Currently or formerly incarcerated persons
- Drug offenders (in criminal Justice)
- Victims of crime
- General (The majority of the funds will benefit no specific group)

Other (Please describe): Children and adults, including veterans and first responders who have lost a limb through trauma.

17d. How many in the target population are expected to be served?

- < 25
- 25-50
- 51-100
- 101-200
- 201-400
- 401-800
- >800

18. What benefits or outcomes will be realized by the expenditure of funds requested? (Select each Benefit/Outcome that applies)

Benefit or Outcome	Provide a specific measure of the benefit or outcome	Describe the method for measuring level of benefit
<input checked="" type="checkbox"/> Improve physical health	Research and development for an improved bionic device which supporting psychosocial factors, independence, and personal acceptance for those with traumatic amputations.	Improved device will be introduced in a clinical trial for adult patients including veterans and first responders. Primary metric: device readiness and clinical study establishment. Assessment devices including: Quality of Life Index for Adults (A-QLI), Zung Self Rating Depression Scale (Zung SDS), Patient Health Questionnaire-9 (PHQ-9) will be used to identify the impacts on mental health and influence on traditional PTSD markers.
<input checked="" type="checkbox"/> Improve mental health	Research and development for an improved bionic device which supporting psychosocial factors, independence, and personal acceptance for those with traumatic	Improved device will be introduced in a clinical trial for adult patients including veterans and first responders. Primary metric: device readiness and clinical study establishment. Assessment devices

	amputations.	including: Quality of Life Index for Adults (A-QLI), Zung Self Rating Depression Scale (Zung SDS), Patient Health Questionnaire-9 (PHQ-9) will be used to identify the impacts on mental health and influence on traditional PTSD markers.
<input type="checkbox"/> Enrich cultural experience		
<input type="checkbox"/> Improve agricultural production/promotion/education		
<input checked="" type="checkbox"/> Improve quality of education	Limbitless Solutions's mixed learning laboratory brings together an interdisciplinary group of undergraduate students, including: engineering, game design, bio-medical, and fine & digital arts majors. This project will support approximately 20 UCF undergraduate students learning and applying research skills in a hybrid mechanics and psychosocial approach.	Primary metrics: total participating undergraduate students, student retention and course progression, completion of training (sensitivity, machinery, and human subjects testing), semester experience reports and assessment of career readiness.
<input type="checkbox"/> Enhance/preserve/improve environmental or fish and wildlife quality		
<input type="checkbox"/> Protect the general public from harm (environmental, criminal, etc.)		
<input type="checkbox"/> Improve transportation conditions		
<input type="checkbox"/> Increase or improve economic activity		
<input type="checkbox"/> Increase tourism		

<input type="checkbox"/> Create specific immediate job opportunities		
<input checked="" type="checkbox"/> Enhance specific individual's economic self sufficiency	Research and development for an improved bionic arm for adult populations who experienced traumatic amputation. Translating the device to clinical applications where patients will take the device home for daily tasks and usability will influence psychosocial, independence, and spatial dexterity that may have a profound impact on quality of life metrics and increase productivity of economic self sufficiency.	Improved device will be introduced in a clinical trial for adult patients including veterans and first responders. Primary metric: device readiness and clinical study establishment.
<input type="checkbox"/> Reduce recidivism		
<input type="checkbox"/> Reduce substance abuse		
<input type="checkbox"/> Divert from Criminal/Juvenile justice system		
<input type="checkbox"/> Improve wastewater management		
<input type="checkbox"/> Improve stormwater management		
<input type="checkbox"/> Improve groundwater quality		
<input type="checkbox"/> Improve drinking water quality		
<input type="checkbox"/> Improve surface water quality		
<input type="checkbox"/> Other (Please describe):		

19. Provide the total cost of the project for FY 2020-21 from all sources of funding (Enter "0" if amount is zero):

Type of Funding	Amount	Percent of Total	Are the other sources of funds guaranteed in writing?

1. Amount Requested from the State in this Appropriations Project Request:	757,550	100.0%	N/A
2. Federal:	0	0.0%	No
3. State: (Excluding the requested Total Amount in #4d, Column F)	0	0.0%	No
4. Local:	0	0.0%	No
5. Other:	0	0.0%	No
<b>TOTAL</b>	<b>757,550</b>	<b>100%</b>	

20. Is this a multi-year project requiring funding from the state for more than one year?

Yes

20a. How much state funding would be requested after 2020-21 over the next 5 years?

- <1M
- 1-3M
- >3-10M
- >10M

20b. How many additional years of state support do you expect to need for this project?

- 1 year
- 2 years
- 3 years
- 4 years
- >= 5 years

20c. What is the total project cost for all years including all federal, local, state, and any other funds? Select the single answer which best describes the total project cost. If funds requested are for ongoing services or for recurring activities, select "ongoing activity".

- ongoing activity – no total cost
- <1M
- 1-3M
- >3-10M

○>10M