Request for Technology Fee Funds: FY19
NOTE: A separate request should be made for each initiative.

I. **Department Number/Department Name:**

360	College of Computing/GVU Center

Title of Request *(please be brief)*: GVU Rapid Prototyping Lab Expansion

Amount of Request *(formula from detailed budget below)*: **$357,000**

Type of Proposal: Atlanta   or   Dist Lrng/Non-Atl — Atlanta

Was this project request funded in FY18? — No — (Yes or No)

Are there installation/renovation costs associated with this request? — No — (Yes or No)

If "Yes" then indicate the source of approved funding:
(Note: Tech Fees are not allowed for installation/renovation)

Executive Summary of Request (100 words or less):

In order to meet the needs of researchers and students affiliated with the GVU center, the prototyping lab requires new tools and technology to meet the evolving demands of Georgia Tech instruction and research.

Specific class and/or lab initiative(s) if applicable:

Contact person for this request (incl. phone #): Tim Trent (385-7610) Keith Edwards (385-7683)

Indicate priority per department if applicable: Number ___ of ___

Indicate priority per college or unit: Number 7 of 7

II. **Impact on Students -** Provide course title, course number, and anticipated enrollments:

Titles/Numbers of Course(s) — (see Section III)

Anticipated Enrollments

Graduate:	268	*(per* yr	*)* sem or yr
Undergraduate:	253	(per yr	) sem or yr
Total:	521		

NOTE: Other impacts on students should be described in narrative.

III. **Narrative -** *Provide narrative justification for your intended use of the technology fee funds. Include narrative on how the education or research of the students will be enhanced. Also include how the request aligns with the Strategic Plan of Georgia Tech. Continue in the block below if necessary.*

CS2698, CS2699, CS3651, CS4605, CS4903, CS4980, CS4698, CS4699, CS7470, CS8903

The GVU Center's Rapid Prototyping Lab acts as a one-stop destination for many students and researchers on campus looking to complete projects that need professional levels of prototyping. The prototyping lab draws from many of the departments across Georgia Tech's campus and is accessible to students and researchers of every college/major. Students work on projects from courses ranging across the institute, not just one college. In an effort to support the many different divisions of Georgia Tech's campus that involve fabrication, the GVU center is constantly looking at how best to meet the needs of its users. After considering the varied projects that are brought into the lab, from Junior/Senior design courses, VIP work, UROP, and graduate research, new tools are required to promote innovation and enrich the student experiment. A precision waterjet would serve as a revolutionary addition to the GVU lab. The proposed waterjet has been developed by a company that has supplied many waterjets to various departments on campus (the Invention Studio, the SCC, etc). The Micromax model requested is much smaller than (cont)

IV. **Detailed Budget - Requested Items by Category** *List separately any equipment, software, and other allowable expenses (see Tech Fee Guidelines). There is a formula in the "total column" that multiplies the number of items times the unit price. You may enter a figure into the total column if the unit pricing is not applicable. If you need additional rows, contact the Budget Office to receive a modified form.*

Supporting documentation is required- *Include price justification in some form, such as quotations, published price lists, etc. as a separate PDF attachment. All supporting information should be in a single PDF.*

	Proposed Number of Items	Estimated Price per Unit	Total ($)
Omax MicroMax Waterjet	1	$300,000	$300,000
Omax Micromax Recommended Accessories	1	$57,000	$57,000
			$0
			$0
			$0
Total *(linked to the total amount of request line above)*			**$357,000**

the other machines on campus and focuses mainly on allowing for extra precision in its cutting. This technology is perfect for a lab that is focused on developing projects that incorporate electronics into Internet of Things and wearable technology, as such precision is often necessary when creating such devices. Additionally, adding a precision waterjet allows for production of prototypes that are impossible in other areas on campus, simply due to material requirements for most other fabrication techniques. For example, many medical devices cannot be 3D printed or lasercut, so the only way to develop a medical device that requires precision machining is with a waterjet. This specific device further establishes Georgia Tech as a center for innovative technologies in the United States, as it has yet to be adopted by universities or industry within the Southeast; Georgia Tech would be one of the few institutes to have such advanced capabilities. With the number of students that must rely on customized parts ordered from outside vendors to complete their projects, the addition of an Omax Micromax machine would greatly benefit a substantial part of the campus community. The expansion of the prototyping lab is an investment in the long-term success of Tech, aligned with the first three of Georgia Tech's Strategic Goals: Be among the most highly respected technology focused learning institutions: Giving students the cross-disciplinary training and experience with cutting-edge rapid prototyping technologies allows graduates to be immediately valuable to employers. Sustain and enhance excellence in scholarship and research: Creating devices as part of classwork or research is a "hands and minds" approach to education. Individual students and researcher labs cannot afford state-of-the-art tools for only occasional use, however the GVU Prototyping lab enables personal experiences with tools that, for many students, are discussed but never directly used in class. Ensure innovation, entrepreneurship, and public service: The prototyping space offered by the lab facilitates prototypes for companies and products from GT courses, research, and individual study. This capability gives users the freedom and resources to create developments that align with their passions, often focusing on underserved populations that are ignored by profit-driven companies.