


January 31, 2024

Robert Goldstein
Office of the Provost
University of Louisville
Louisville, KY 40292

We have been asked to provide a letter of support for the proposed PhD in Translational Bioengineering. Our attached review indicates that the Libraries have adequate resources to support this program and no new resources would be required.

Please contact us if you have any questions or need additional information.

Sincerely,



Robert E. Fox, Jr.
Dean, University Libraries

CC: Rob Detmering
Bruce Keisling
Betty Nunn
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PROGRAM REVIEW

PhD in Translational Bioengineering

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BACKGROUND

University of Louisville (UofL) Libraries are comprised of:

- 1) Ekstrom Library serving humanities, social sciences, life sciences, business, engineering, physical sciences, and technology,
- 2) Kornhauser Health Sciences Library,
- 3) Anderson Music Library,
- 4) Bridwell Art Library,
- 5) The Law Library, and
- 6) University Archives and Special Collections.

UofL's library system supports the teaching and research needs of more than 22,000 students and more than 7,000 faculty and staff. UofL belongs to the Association of Research Libraries (ARL), an organization of 126 North American library systems affiliated with large, comprehensive research institutions; the State-Assisted Academic Library Council of Kentucky (SAALCK); and Kentuckiana Metroversity, a consortium of Louisville area libraries.

This report provides a summary of library resources that support teaching and research in the area being proposed. It identifies areas of weakness and concludes whether the library's current resources are adequate to support the new program or not. When necessary, this report also identifies resources that could be purchased to increase and strengthen the library's support for this program.

SERVICES

Research Assistance and Instruction

Each library within the University of Louisville Libraries offers instruction programs designed to meet the needs of its researchers. Ekstrom Library's information literacy program provides both face-to-face and online research instruction tailored to specific courses and assignments. The library's Research DIY website offers additional online support for students, with brief video tutorials, infographics, and other instructional materials. There are also specific online research guides for Bioengineering, patent research, and standards that provide access to relevant databases and materials for the proposed program.

Ekstrom Library also provides research assistance through in-person consultations, e-mail, telephone, and online chat. Ekstrom also has an assigned library liaison and subject specialist for the Speed School of Engineering, Kristina Bloch.

For graduate students and other advanced researchers, the library offers training and support for literature searches, systematic reviews, data management plans, and research impact metrics via the [Scholar Services](#) program. The Libraries also provide regular training in [EndNote](#) and [Zotero](#) citation management software. Advanced researchers can also benefit from the tools and strategies featured on the library's [Productive Researcher Portal](#).

Interlibrary Loan and Document Delivery

Faculty and students can access books and articles not held by UofL Libraries through [Interlibrary Loan](#). Document delivery services allow patrons to request that library-owned articles or book chapters less than 50 pages in length, and within copyright fair use guidelines, be scanned and delivered to them electronically. Ekstrom Library has a [Distance Learning Services Specialist](#) who provides online learners with access to print and electronic resources.

STAFFING

According to the most recent data available from ARL, UofL Libraries' staff to student ratio is slightly above average compared to our established benchmark institutions.

<u>FY21</u>	<u>Library Staff</u>	<u>Full-Time Students</u>	<u>Ratio Staff : FT Students</u>
SUNY @ Stony Brook University	64	22,457	1:350
University of Alabama @ Birmingham	114	37,402	1:328
Temple University	126	32,275	1:256
SUNY @ Buffalo	115	26,500	1:230
University of Cincinnati – Main Campus	133	29,817	1:224
University of California – Irvine	162	35,154	1:217
University of Illinois @ Chicago	129	28,055	1:217
University of South Carolina	166	33,104	1:199
Wayne State University	105	18,831	1:179
University of California – San Diego	220	38,072	1:173
Virginia Commonwealth University	141	23,980	1:170
University of Louisville	104	16,777	1:161
University of Pittsburgh – Main Campus	211	30,226	1:143
University of Utah	199	25,405	1:127
University of Iowa	193	25,185	1:130
University of New Mexico	129	14,920	1:115
University of North Carolina @ Chapel Hill	300	25,202	1:84

COLLECTIONS

Books

Here is a breakdown of a the library's current holdings of both print and eBooks, categorized by relevant Library of Congress subject heading:

LC Subject	# of Print Books	# of eBooks	Print Books published in last 5 years	eBooks published in last 5 years
Bioengineering	275	340	0	71
Biomedical engineering	246	713	0	157
Regenerative medicine	6	66	0	22
Biomedical technology	179	114	0	19

Periodicals

UofL currently has online full-text access to the following journals that focus on topics related to the proposed program.

Journal	Online Full-Text Holdings
Annals of Biomedical Engineering	1997-Present
Annual Review of Biophysics	1972-Present
Annual Review of Biomedical Engineering	1999-Present
Artificial Organs	1977-Present
APL bioengineering	2017-Present
Bioengineering & Translational Medicine	2016-Present
Biofabrication	2009-Present
Biotechnology & bioengineering	1962-Present
Cellular and molecular bioengineering	2008-Present

IEEE journal of translational engineering in health and medicine	2013-Present
IEEE Reviews in Biomedical Engineering	2008-Present
Journal of bioscience and bioengineering	1999-Present
Journal of biotechnology	1995-Present
Journal of Industrial Microbiology and Biotechnology	1996-Present
Journal of Nanobiotechnology	2003-Present
Lab on a Chip- Miniaturisation for Chemistry and Biology	2001-Present
Medical & biological engineering & computing	1997-Present
Tissue Engineering	1995-Present
Translational Research in Anatomy	2015-Present
Trends in Biotechnology	1983-Present

Online Databases

The following databases offer indexes, abstracts, and full-text access to the periodicals listed above plus thousands of other publications and data related to the proposed program.

- American Chemical Society Web Edition
- ClinicalKey
- Compendex
- EBSCO Academic Search Complete
- Embase
- IEEE Xplore
- INSPEC
- MEDLINE (EBSCO)
- MEDLINE (Ovid)
- MEDLINE (PubMed)
- ProQuest Dissertations & Theses Global
- PubMed
- ScienceDirect
- SciFinder
- Web of Science

Analysis of Collections

- Given that there has been a decrease in print publications in STEM+H, the selection of recent eBooks and availability of print materials through Interlibrary Loan is sufficient to support this program.
- The Bioengineering journals that we currently have immediate access to are highly cited journals in the field, including *Bioengineering & Translational Medicine* (h5-index 35), *IEEE Reviews in Biomedical Engineering* (h5-index 45), and *Journal of Bioscience and Bioengineering* (h5-index 40).
- The most relevant and largest databases including Web of Science, Compendex/INSPEC, ScienceDirect, and PubMed are sufficient for searching for Bioengineering research.
- There are no new classes being developed for this program. Our current resources are sufficient given occasional updates to our collections.

RECOMMENDATIONS

- Updating eBook collections within the existing budget annually is recommended to ensure that relevant and current materials are accessible.
- The newly hired tenure-track Engineering Librarian will provide sufficient staffing and support for this program.
- The Engineering Librarian may also develop additional research guides and instructional materials to support this PhD program in addition to providing course-based instruction and offering research appointments.

CONCLUSION

- The University of Louisville Libraries have adequate resources to support the proposed program.
- The University of Louisville Libraries have resources that marginally support the proposed program. We recommend providing funding for the purchase of materials and resources outlined in the Recommendations section of this document.
- The University of Louisville Libraries do not have adequate resources to support the proposed program.