

CSTAT Facilities, Technology, & Services

MSU's Center for Statistical Training and Consulting (CSTAT, <https://cstat.msu.edu>) is a professional service and research unit located within the Office of Research and Innovation. It is part of the university's infrastructure dedicated to facilitating excellence in research. CSTAT leads efforts to increase scientific rigor and reproducibility that improve the quality and impact of research to help MSU scholars thrive. Our statisticians collaborate with MSU researchers on study design, collection, management, and analysis of research data, on grant proposals, and on other projects. Our team also provides training in state-of-the-art statistical methods, statistical software, and research data management. CSTAT also supports technical software and advanced computing in research.

Staffing

CSTAT's collaboration and consulting team consists of a director, three additional PhD statisticians, plus a data analyst and 3-6 research assistants (advanced graduate students) or postdoctoral scholars at a time. Members of that team have professional networks that link them to faculty experts in a wide range of statistical and methodological topics, located both inside and outside of MSU. A research administrator, an administrative business analyst, and an information technologist support the unit's work.

Facilities

CSTAT's offices are located in Giltner Hall on the main MSU campus at 293 Farm Lane, East Lansing, MI. The gated parking lot next to Giltner Hall provides parking for faculty and staff. All full-time CSTAT employees have individual offices as well as rooms for group meetings and technology for virtual conferences. The Administrative Business Analyst sits at a reception desk and there are 4 shared workstations available for use by student employees. CSTAT has a conference room and a small break room.

Workspaces for CSTAT employees are equipped with high-speed internet access and typical office equipment (telephones, copier, scanner, printers, whiteboards, lockable filing cabinets, etc.) and supplies. CSTAT maintains a private library of research design and statistical methodology books to supplement materials available through the university's library system.

CSTAT offices and workspaces are locked when not occupied by CSTAT personnel. Giltner Hall doors are automatically locked after normal business hours, with after-hours access electronically controlled by a proximity card reader system and permissions assigned to employees' university identification cards.

Technology

All CSTAT employees have access to laptop and/or desktop computers with videoconferencing capabilities, plus shared workstations equipped with thin-client devices that can remotely access CSTAT's virtual server. Computers owned by CSTAT run anti-virus and anti-malware security software, as required by MSU IT policies and software tools that require up-to-date security software before permitting connections to the university's virtual private network (VPN).

The virtual server is hosted in the university's campus-wide VMware data center. Physical access to the hardware running CSTAT servers is strictly controlled by the university and granted only to authorized IT personnel who have a legitimate business need to enter the data center. The server is maintained by a professional IT analyst, who protects them with a combination of frequent backups, software-enforced security policies, role-based user permissions, firewalls, anti-virus and anti-malware software, plus active monitoring of event logs.

The server gives CSTAT employees secure remote access—via the VPN coupled with Windows Remote Desktop Protocol—to electronic file storage, Microsoft Office, and a large collection of mathematical and statistical software packages (Amos, HLM, LISREL, Mathematica, MATLAB, Minitab, Mplus, Optimal Design, R, SAS, SPSS Statistics, Stata, and WinBUGS). Videoconferencing equipment and a computer are available in CSTAT's conference room.

These technology resources enable CSTAT employees to facilitate meetings in-person or remotely as needed.

Educational Offerings

CSTAT hosts a series of courses, workshops, and seminars with topics including hands-on introduction to statistical software packages, study design, as well as more advanced statistical methodologies, responsible conduct of research, data management, and other topics. These events are typically taught by CSTAT consultants or outstanding MSU faculty recruited to teach topics in which they have expertise. There are fees for some courses and workshops, but seminars are free. Registration for all events is available via links from CSTAT's website.

Collaboration and Consulting Services

Clients may register for collaboration and consulting services via our website. CSTAT offers two levels of service: (1) core service and (2) research partnerships. Internal MSU clients from sponsoring colleges or units



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are eligible for some free core services as determined by the sponsor. Others may receive research partnership service by negotiating an agreement and corresponding fees with CSTAT. External clients are eligible for fee-based research partnership services under a negotiated contract. CSTAT assigns statisticians to work with clients by matching their expertise to the client's project needs.

Core Service. The focus of core service is primarily on building the client's capacity to apply statistical methods and provide a solid foundation for reproducible data management. Therefore, it typically involves advising clients on research design (e.g., experimental, quasi-experimental, or observational design, planning sample size or sampling strategies, designing survey instruments, or other data collection methods); advice on data structures and metadata; selection, application, and interpretation of appropriate statistical methods; and how to use software to perform their analyses. Occasionally, CSTAT refers clients to other experts or units on or off campus who have specialized expertise relevant to a client's project, or that provide services CSTAT does not offer.

Research Partnerships. Partnership services can include data management, statistical modeling, grant proposal writing, or involve longer-term collaboration on projects of broader scope. Such collaboration might involve co-authorship of papers, conference presentations, or other publications designed to communicate research findings to diverse audiences. It may also include collaboration on grant/contract proposals or funded grants and contracts where CSTAT personnel will serve as key personnel, consultants, or co-investigators supported by the project budget.

Fees

Help with grant proposal preparation is free, if CSTAT staff are included in the post-award budget at a sufficient level. Core consulting services and graduate student dissertations may be covered by sponsoring agreements with various colleges or units within the university.

CSTAT personnel will meet with clients interested in research partnerships to discuss the scope of work, schedule, and other details of the potential project before preparing a proposed budget or price quote. When preparing bids for clients, we have some flexibility to negotiate terms of payment. We primarily use two different billing approaches: a *cost-reimbursement* approach and a *time & materials* approach.

Cost-Reimbursement. Under this approach, we bill for fixed percentages of our personnel costs plus selected additional expenses during specific portions of the project period. The fixed percentages represent a commitment to provide the specified amount of effort to the project during a given period. We typically use this approach when we are written into grant proposals as named personnel (e.g., PI, Co-PI, Co-I, Key Personnel). In such instances, CSTAT personnel should receive indirect cost (IDC) credit on the Quali Research (KR) proposal development document in EBS so that CSTAT will receive a fair portion of the IDC funds from the project.

Time & Materials. Under this approach, we bill for personnel effort expended (which may vary from pay period to pay period) at pre-specified hourly rates plus any required expenses that are not already built into the hourly rates. MSU's Office of Financial Analysis and Reporting (OFAR) approved a set of hourly statistical consulting service billing rates for use by CSTAT, effective November 14, 2022. These rates will be updated at least every two years; CSTAT will bill clients using the most current OFAR-approved rates applicable when work is performed. Two factors determine the hourly rate: Whether the client is internal or external to MSU and the type of CSTAT personnel providing the services.

CSTAT Personnel Type	Hourly Billing Rate (US \$)	
	Internal ¹	External ²
Research Assistant ³	79.23	99.83
Business Analyst	92.95	117.12
Data Analyst/Manager	105.90	133.43
Statistician or Staff Statistician ⁴	121.78	153.44
Senior or Associate Statistician ⁵	134.17	169.05

¹ Internal rates apply to on campus clients, MSU departmental billing, and to charges on federal/state grants administered by MSU's Contract and Grant Administration.

² External rates already include MSU's indirect cost rate.

³ Includes all graduate student employees.

⁴ Includes fixed-term and continuing track academic specialists who do not yet have continuing status.

⁵ Includes Director, Associate Director, and academic specialists with continuing status, and senior academic specialists.

Want More Information? Contact Us!

Website: <http://cstat.msu.edu> (case studies, staff bios, consulting request form, workshop registration)

Email: cstatinf@msu.edu

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