2024-25

TLOS ANNUAL REPORT

Technology-enhanced Learning and Online Strategies

Office of the Executive Vice President and Provost

Introduction

In our third year under the Provost's Office, Technology-enhanced Learning and Online Strategies (TLOS) deepened our impact across our four mission-focused areas: course and program design, faculty digital fluency, accessible technologies and Universal Design for Learning (UDL), and the digital learning ecosystem. This year, TLOS strengthened our leadership capacity by sponsoring nearly half of our staff to participate in the MOR leadership development program. TLOS also advanced numerous strategic initiatives, such as enhancing support for Professional Graduate Programs (PGPs), expanding instructional media capabilities, preparing the university community for revised Americans with Disabilities Act (ADA) Title II regulations, and facilitating generative AI projects. We are pleased to present our key accomplishments for the 2024-25 academic year.

Course & Program Design

Enhancing Support for Professional Graduate Programs

We expanded PGP support by offering program design, course development, and targeted faculty training in support of flexible learning for graduate programs, including the Online Master of Natural Resources, the Online Master of Business Administration, and the Online Master of Agriculture and Life Sciences. We also implemented services for comprehensive program evaluation to assess the effectiveness and quality of programs engaged in flexible learning. Our recent review of the Executive Master of Natural Resources evaluated program effectiveness and provided actionable insights for continuous improvement.

Supporting Flexible Teaching

We strengthened flexible teaching capacity and research design practices through targeted course and program assistance. Key examples include partnering with Virginia Tech's Carilion School of Medicine on a curriculum redesign of their first-year program and collaborating with Business Information Technology to convert face-to-face courses to a hybrid modality.

200+ Developed more than 200 media-rich learning objects for courses delivered in flexible modalities.

6 Supported course design and provided professional development for 6 new or existing Professional Graduate Programs.

18 Assisted 18 Flexible Teaching Fellows with course quality initiatives.

Expanding New Capabilities in Instructional Media

To empower faculty to create impactful, high-quality instructional media, we established a new Media Hub. Functioning as a dynamic, universitywide resource, the Media Hub offers immersive media, interactive learning, creative services, and remote production capabilities, including professional studio recordings, 360° video, AR/VR experiences, and collaborative design spaces. To enhance our on-campus support, we designed and renovated our space in Whittemore Hall to better support innovative media development and instructional media consultation.

Faculty Digital Fluency

Providing Targeted Training through Strategic Partnerships

We delivered discipline-specific training through partnerships with individual colleges, including eight specialized workshops with Pamplin College of Business and tailored sessions for numerous departments focused on generative AI, accessibility, and Canvas best practices. In collaboration with the Center for Excellence in Teaching and Learning, University Libraries, and Undergraduate Education, we also facilitated the Summer Institute, which drew 334 registrants from eight colleges and several administrative units for workshops, consultations, and cohort meetings.

Developing AI Programming for Faculty

In support of the university's AI Working Group recommendations, we developed comprehensive AI programming for faculty, including the four-workshop series "AI Essentials for Teaching and Learning," which will launch in August 2025. We also integrated additional AI courses across our faculty digital fluency curriculum.

561 workshops facilitated by the Professional Development Network (PDN).

4,497 unique participants completed at least one course.

429 faculty received computers from the Computer Refresh Program.

Expanding Faculty Digital Fluency Curriculum and Professional Development Network Offerings

Following a comprehensive evaluation of our faculty digital fluency curriculum, we addressed key gaps by expanding our Professional Development Network (PDN) offerings across six core categories: Flexible and Online Teaching, Universal Design and Digital Accessibility, Generative AI for Teaching and Learning, Instructional Media, Learning Environments and Tools, and Technology-Enhanced Instructional Strategies.

Accessible Technologies and Universal Design for Learning

Preparing for Revised ADA Title II Regulations

To prepare for revised ADA Title II regulations (effective April 2026), we coordinated awareness campaigns, introduced technology enhancements, and expanded training. Key highlights include participating in the university's Title II Working Group and subcommittees and creating a new full-time position focused on document accessibility. Technology enhancements include implementing Deque Axe DevTools and Axe Monitor for web accessibility, upgrading JAWS and ZoomText to site licenses, and exploring new PDF accessibility solutions. We also broadened accessibility knowledge universitywide by offering more than 40 new self-paced training modules through Deque University and WebAIM, delivering 17 digital accessibility workshops, creating the Keep C.A.L.M. and Check Reading Order campaign, and delivering more than 25 targeted outreach presentations on Title II readiness. Leveraging academic unit partnerships, Canvas Ally data, and quarterly Accessibility Network meetings, we fostered a culture of continuous improvement in pursuit of ADA Title II compliance. Our work also extended to state-level advocacy, contributing to alignment of Virginia's IT Access Act with the ADA Title II updates.

300+ participants attended UDL-related conferences, workshops, and seminars.

23 full-time employees completed the Spring 2025 CPACC program.

67% to **79%**
Improved the accessibility of the top 40 Virginia Tech websites from 67% to 79% over seven months.

Applying Universal Design for Learning to Enhance Academic Success

We accelerated Universal Design for Learning (UDL) implementation by integrating accessibility and outreach to all learners through teaching practices and technology guidance. Our coordinated strategies engaged more than 300 faculty, administrators, and graduate teaching assistants through faculty mentoring, professional development events, targeted course redesigns, and interactive workshops. Key highlights include a peer mentoring program supporting 13 participants in redesigning five courses with UDL principles, two events emphasizing practical ADA compliance and pedagogical strategies for reaching all learners attended by 120 participants, a 17-member book club fostering reflection on accessible course design, and the launch of an advanced self-paced UDL course. These efforts strengthened institutional accessibility support and cultivated both communities of practice and an academic culture of opportunity for all learners.

Digital Learning Ecosystem

Re-assessing Video Content Management System Tools and Strategies

Under joint sponsorship with the Vice President for Information Technology and Chief Information Officer, we initiated a reassessment of our current video content management system, Kaltura. We researched multiple video content management systems and held vendor demos with participation and input from multiple stakeholder groups. A final report, including a recommendation for next steps, will be delivered to sponsors in early FY26.

Expanding AI Integration in Teaching and Learning

We advanced universitywide AI literacy through targeted programming, extensive faculty support, and strategic pilots. To foster AI literacy among faculty, we launched the AI Essentials for Teaching and Learning workshop and maintained the Teaching with AI portal with updated ethics guidance, syllabus templates, and discipline-specific teaching scenarios. We engaged faculty through two generative AI software pilots, instructional design, and departmental consultations, ensuring teaching resources aligned with the university's Responsible and Ethical AI principles. The ChatGPT Edu pilot provided access to 480 employees and graduate students across teaching, research, and operations, with findings informing recommendations to the university's AI Working Group. The Rolai pilot launched in June 2025 with a focus on Canvas-integrated teaching applications and student usage.

Evaluating Canvas Extensions

We strengthened our evaluation process of third-party Canvas tools to better safeguard data and improve the faculty and student experience. Enhancements included establishing MOUs with all departments for tool integration and implementing a two-stage review process: an initial assessment to determine evaluation readiness and a comprehensive testing review. This approach increased transparency, reduced risk, and empowered departments to make informed technology adoption decisions.

50%

More than 50% of core teaching and learning tools are represented in the TLOS Tool Finder (tlos.vt.edu/tools).

8 innovative technology-enhanced learning grant projects launched with 4-VA funding support.

50%

reduction in time for software approval and implementation of Canvas extensions through partnership with VT Procurement.

Conclusion

Reflecting on the past year, we have better positioned Virginia Tech for accessible, innovative, and effective teaching and learning by way of strategic initiatives that directly supported instructors and partnering departments. These mission-focused initiatives–enhancing PGP support, evolving our PDN curriculum, preparing the university for Title II compliance, and advancing AI integration for teaching and learning–help prepare and support Virginia Tech's faculty and students to successfully navigate a rapidly changing higher education landscape.

Plans and Goals for the Upcoming Year

Lead Universitywide Digital Accessibility Compliance

With the April 2026 ADA Title II deadline approaching, we will continue preparing Virginia Tech for comprehensive digital accessibility compliance by scaling consultation services to reach every academic department and providing targeted support for making course materials accessible. Our multi-pronged approach to document remediation will include expanding internal capacity. We will establish external remediation services for high-volume accessibility needs, deploy automated tools for simple fixes, and our new accessible documents specialist will promote the PREP platform. Following past success, we will develop and promote awareness campaigns that make accessibility concepts approachable and actionable. We will leverage Ally data within Canvas to identify courses and instructors in greatest need of assistance and offer them customized workshops and one-on-one consultations tailored to their disciplinary needs. Throughout this work we will strengthen our partnership with the university's Title II Working Group to ensure coordination across all units. To extend our reach, we will promote expanded training offerings via Deque University and WebAIM and build a distributed network of accessibility liaisons within each college for peer support and advocacy.

This work supports **Virginia Tech Advantage** by removing barriers for students with disabilities who enter the university with challenges that, if unaddressed, can derail academic progress and extend time to graduation. For **Global Distinction**, our leadership on accessibility positions Virginia Tech as a model institution for accessible education, establishing our faculty as thought leaders in Universal Design for Learning.

Advance Systematic AI Integration in Teaching and Learning

In the coming year, we will transition from experimentation to systematic integration of AI tools in teaching and learning. The recent launch of our "AI Essentials for Teaching and Learning" series marks the beginning of comprehensive faculty development, expanding beyond workshop offerings to include discipline-specific implementation guides, consultation services, and communities of practice that support meaningful, ethical AI integration into pedagogy. Complementing faculty development, we will also collaborate with Canvas and other platform providers within our digital learning ecosystem to evaluate instruction-enhancing AI capabilities while maintaining academic integrity. This will include exploring AI-assisted feedback systems for formative assessments, intelligent content recommendation engines, and tools for efficient creation of engaging learning materials. Our initiatives will align with Virginia Tech's Responsible and Ethical AI Principles, with particular attention to preventing bias and ensuring fair, non-discriminatory application and the need to support rather than replace human instruction.

These initiatives support **Global Distinction** by elevating our faculty as leaders of pedagogical innovation while potentially supporting research activities. For **Virginia Tech Advantage**, thoughtfully implemented AI tools can help students with varying preparation levels succeed in challenging courses by providing personalized support.

Expand Adaptive Learning Infrastructure

Our newly organized Digital Learning Innovation group will take a measured approach to building institutional capacity in the area of in-course learning analytics and learning innovation development. We will focus on high-value partnerships with peer units in the Provost's Office that demonstrate tangible impact on student success. Our immediate priorities include continuing development support for the Bridge Experience Program and Pathways assessment Canvas applications, which leverage our technical expertise in both data analytics and solution development to serve clear institutional needs. These partnerships provide proof-of-concept for learning analytics applications that build trust and demonstrate value. As these initiatives mature and our development capacity increases, we will develop Canvas-based solutions providing faculty and students with actionable learning progress insights, starting with simple tools and expanding based on user feedback and demonstrated impact.

Along with learning analytics, we will lead the exploration of adaptive learning technologies through close collaboration with Undergraduate Academic Affairs and interested departments. We anticipate piloting adaptive learning technologies in gateway courses where personalized pathways can most impact student success. These pilots will focus on high-enrollment prerequisite courses for multiple degree programs, which historically have higher DFW (grade of D/F or withdrawal) rates. We anticipate providing responsive environments that personalize student experiences and give faculty timely insights to improve learning outcomes and support at-risk learners.

These initiatives support **Virginia Tech Advantage** by providing early intervention opportunities that prevent course failures and support timely graduation. The data and insights generated also contribute to **Global Distinction** by enabling rigorous research on educational effectiveness.

Provide Leadership for Flexible, Online, and Distance Learning

To capitalize on the growing demand for flexible and online education, Virginia Tech requires clear, centralized leadership to guide its digital learning strategy. TLOS is ready to transition from its traditional role as a responsive support unit to a proactive leader in this domain. We will assist in defining and coordinating institutional priorities, establishing the frameworks, quality standards, and scalable processes necessary for success across all online and hybrid initiatives.

Our recent work with Professional Graduate Programs (PGPs) includes course design and quality assurance support and demonstrates a successful model for this leadership. We will now formalize this approach to build capacity for anticipated growth, ensuring consistent quality and efficiency across undergraduate and graduate initiatives. By providing clear leadership, we will eliminate confusion about university resources and empower faculty to deliver exceptional digital learning experiences. Building on our current momentum, we look forward to working with the new Provost to establish a unified vision that positions Virginia Tech as a leader in digital education.

These efforts directly support **Virginia Tech Advantage** by ensuring that flexible learning options maintain high standards that promote student success and timely graduation. For **Global Distinction**, our leadership in pedagogical innovation positions faculty to contribute to teaching and learning scholarship while delivering cutting-edge educational experiences.

Reinvestment Strategies

In support of the university's request to align funding for strategic priorities, we will return $33,333 as the second part of a three-year phased reduction in support for computer labs.

Appendix

TLOS is a unit within Virginia Tech's Office of the Executive Vice President and Provost. Its mission is to improve student learning by fostering digital fluency, partnering with faculty on digital learning experiences, and providing technology-enhanced environments for flexible and online learning. TLOS, formed in 2013, is led by Dale D. Pike, Associate Vice Provost, and Quinn Warnick, Assistant Vice Provost.

The unit is comprised of approximately 45 professionals organized into four main functional areas:

- Learning Services (including Instructional Design, Instructional Media Development, and the Professional Development Network)
- Support and Documentation (including Computer-Integrated Learning Spaces)
- Accessible Technologies and Universal Design for Learning (UDL)
- Digital Learning Innovation

TLOS has the following key responsibilities:

- Providing instructional tools and environments
- Facilitating course and program design
- Promoting digital fluency
- Fostering UDL and digital accessibility
- Supporting innovative educational technologies
- Offering professional development
- Managing computer labs
- Facilitating communities of practice

The team includes instructional designers, learning technologies specialists, accessibility experts, multimedia producers, learning data analysts, project managers, and support staff. TLOS has led major initiatives such as updating the learning management system, modernizing video platforms, enhancing faculty grants for online instruction, and exploring learning analytics and AI in education. TLOS operates on principles emphasizing learning improvement, building and fostering partnerships, stakeholder balance, inclusivity, and data-informed accountability, aligning with Virginia Tech's *Ut Prosim* mission and Principles of Community.