

M State Information Technology Advisory Meeting Summary
9/15/2026

Key Takeaways

- The advisory committee reviewed proposed curriculum changes across IT, Cybersecurity, and Computer Programming programs, with a strong emphasis on teaching foundational "why" alongside practical "how."
- A consensus emerged to restructure networking education: merge basic networking fundamentals into the Informatics course, replace Cisco 1 with a vendor-neutral networking fundamentals course, and replace Cisco 2 with the Survey of Artificial Intelligence.
- A new Computer Science AS (transfer) degree is being proposed, with discrete mathematics as a critical addition to enable smoother transfer pathways to four-year institutions (MSUM, NDSU, UND, U of M).
- Critical thinking, AI literacy, business risk awareness, and communication skills were repeatedly identified as essential competencies missing or underemphasized in current programs.
- Advisory members offered to contribute guest lectures, tabletop exercises, and industry use cases to enrich classroom experiences.

Note: To-Do Items listed in Bold

- **Tim Preuss**
 - [] Revise the Informatics course to include essential networking fundamentals (ping, traceroute, IP configuration, basic encryption, and up to layer 3 concepts) applicable across all majors.
 - [] Develop or source a vendor-neutral Networking Fundamentals course to replace Cisco 2, covering VLANs, subnetting, routing, basic firewall concepts, and layer 1–3 principles.
 - [] Finalize the plan to replace Cisco 2 in the Cybersecurity AAS and certificate with the Survey of Artificial Intelligence.
 - [] Write the Cybersecurity AS transfer degree program outcomes.
 - [] Revise Cybersecurity AAS program outcomes to reflect auditing over configuration, business risk alignment, and policy management, reducing from 13 to 9 outcomes.
 - [] Revise IT program outcomes from 10 to 9 and submit through the formal approval process.
 - [] Revise Fundamentals of IT Security and Introduction to Networking course outcomes to explicitly reflect the "why" alongside hands-on instruction, in alignment with MSUM equivalents.
 - [] Revise Linux 2 course to align more closely with MSUM's Linux Programming and Development Tools course.
 - [] Consult with Juan Cabanela at MSUM regarding course alignment, transfer credit agreements, and what can realistically be approved for the Cybersecurity AS pathway.
 - [] Work with Pann Ajjimaporn and Jason Peterson to review and potentially streamline scripting course objectives (CPTR 1001 and Scripting for Automation), including introduction of source control as a standard primitive.
 - [] Redesign the cybersecurity certificate around foundational awareness and the "why" of cybersecurity for non-technical audiences.
 - [] Send a general email to the advisory group requesting guest speaker and tabletop exercise volunteers by topic and availability.
 - [] Formally propose the addition of a discrete mathematics course through the math department, framing the justification around transfer success rates and dropout data.
 - [] Explore the possibility of connecting a vendor-neutral networking fundamentals course with HVAC/OT programs given CISA's OT (Operational Technology) security focus.
- **Jason Peterson and Pann Ajjimaporn**
 - [] Review CPTR 1001 objectives to remove content that belongs in Programming Logic and to introduce source control (e.g., Git) as a standard programming primitive.
 - [] Review Scripting for Automation objectives to ensure alignment with MSUM's CSIS 162 and position it as the capstone scripting course before transfer.