

MISSION: Provide dynamic learning for living, working and serving. VISION: A success story for every student and stakeholder.

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| ADVISORY COMMITTEE MEETING | | | |
| Advisory Committee: | Computer Programming, Information Technology-AS and Network Administration & Security | | |
| Meeting Date: | February 2, 2020 | Chair: | James Anderson |
| Time: | 1:00 PM | Vice Chair: | None Yet |
| Location: | B142 and Zoom | Recorder: | Dave Hjalmquist |
| Committee Members: | Deb Flaskerud, Dave Hjalmquist, Tim Preuss, Janet Johnson, Carrie Ward, Raliegh Porter, James Anderson, Jon Tassava, Bruce Curtis, Jeremy Simpson, John Kollman, Jody Bauer, Ben Svobodny, Peter Bushaw, Johan Lucas. | | |
| Resources: |  | | |

*Important Note: Advisory Committees meet twice per year. While every topic on the agenda template may not be addressed at both meetings, all topics should be addressed over the course of the year.*

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| AGENDA/MINUTES | | |
|  | Agenda | Minutes/Decisions |
| 1. | Welcome and Updates   * Communications Check (Audio and Video) * Call meeting to order * Additions/approval of agenda * Approve last meeting minutes * Update advisory membership list and introduce new members (using sign in sheet) * College update from an academic dean | Deb Flaskerud motioned to approve and Jon Tavassa 2nd to approve agenda.  Deb Flaskerud motioned to approve and Jon Tavassa 2nd to approve the last meeting minutes.  Introductions were made.  Sign in sheet was created for those in attendance.  Tim and James led the meeting.  Carrie Ward was in attendance as the academic dean  Tim explained the Collegiate Cyber Defense Competition and that we have 8 students going to in as a team and four alternates. |
| 2. | Chair/Vice Chair Elections | None to report |
| 3. | Program Updates/Changes Since Last Meeting | None to report |
| 4. | Discussion of Student and Program Graduate Performance   * Student retention and completion * Placement rates * Student success stories * Advisory Committee Survey results | None to report |
| 5. | Discussion of Industry Trends | There was quite a bit of group discussion on Google Cloud technology at MState. Tim mentioned the instructor Jason Peterson has experience with Azure also.  Tim asked the group for discussion on Data Analytics.  There was group discussion on class CPTR2275 Data Analytics competencies Jason Peterson set up. Jon Tavassa said he feels programming students are better suited for doing data analytics. |
| 6. | Course and Program Plan Review |  |
| 7. | Program Outcome Review | Tim went thru each programs outcomes and the group decided if there should be NO CHANGE, RECOMMEND CHANGE, REPLACE for each outcome.  James said we should add security to Computer Programming to the outcomes.  Computer Programming Group Results  1.  These are the current program outcomes for this program. Selecting "No Change" means the outcome should remain as a program outcome unchanged. Selecting "Recommend Change" means keep the idea of the outcome, but reword . Selecting "Replace" means the outcome and idea is no longer required/desired.  1. Demonstrate professionalism including presentation skills, utilizing research for problem solving, working independently and in teams, being accountable and meeting deadlines.  2. Analyze business problems and prepare program definitions for computerized solutions.  3. Create, document and implement computerized solutions using a variety of languages.  4. Apply testing and debugging methods to assure quality and workability of finished programs.  5. Solve problems using appropriate mathematical and/or scientific techniques.   |  | | --- | | 2. Analyze business problems and prepare program definitions for computerized solutions. | | No Change: 100% |   2.  These are ACM recommendations. Selecting "No Change" means the outcome should remain as a program outcome unchanged. Selecting "Recommend Change" means keep the idea of the outcome, but reword . Selecting "Replace" means the outcome and idea is no longer required/desired. Option 6 and following are Knowledge Areas from ACM Software Engineering 2014 (se2014). https://www.acm.org/binaries/content/assets/education/se2014.pdf  More Details  Group did not find anything to add from the ACM guidelines.  3.  Please enter any new or improved program outcome wording below.  More Details  1  Responses  Latest Responses  *"Security Software Quality "*  There was group discussion on whether to have students take a logic test to show if they would most likely have success in the class. As a point of clarification, a test/interest survey is recommended to all incoming M State students. The idea is to discover those who may have talent for programming or information technology to consider the field. On the converse this would help advise those who will struggle before spending time in class.  Johan Lucas joined the group through Zoom. Due to technical/human errors his comments did not get broadcasted during the meeting. His comments follow.  “We do aptitude tests to determine if people will do well in programming. For a training institution it might be useful to give students an idea if they want to do the course and the likelihood of them  be able to keep up with the rest of the class.  Ever considered adding courses for mobile app development using Kotlin (Android) and Swift (Apple)?  Maybe add an elective for computer gaming design and play?”  CyberSecurity -AAS group result  These are the current program outcomes for this class. Selecting "No Change" means the outcome should remain as a program outcome unchanged. Selecting "Recommend Change" means keep the idea of the outcome, but reword . Selecting "Replace" means the outcome and idea is no longer required/desired.  More Details  1. Use mechanisms available in an operating system to control access to resources.  2. Configure infrastructure server roles.  3. Investigate various countermeasures and security controls to minimize risk and exposure.  4. Support the ethical responsibility of ensuring software correctness, reliability and safety.  5. Illustrate through examples the concepts of risk, threats, vulnerabilities, attack vectors and exploits, noting there is no such thing as a perfect security.  6. Analyze known security incidents to trace and document the steps in the incident.  7. Develop technical artifacts.  8. Examine ethical issues related to cybersecurity.  9. Write a company-wide security policy.  10. Communicate effectively and efficiently with clients, users and peers.  11. Design and build virtual computing environments.  12. Use a variety of ciphers to encrypt plaintext into ciphertext.  13. Construct input validation and data sanitization in applications, considering adversarial control of the input channel.   |  | | --- | | 4. Support the ethical responsibility of ensuring software correctness, reliability and safety. | | No Change: 100% |   2.  These are ACM recommendations. Selecting "No Change" means the outcome should remain as a program outcome unchanged. Selecting "Recommend Change" means keep the idea of the outcome, but reword . Selecting "Replace" means the outcome and idea is no longer required/desired. Option 6 and following are Knowledge Areas from ACM Computer Security (csec2017). https://www.acm.org/binaries/content/assets/education/curricula-recommendations/csec2017.pdf  More Details  No Change  Recommend Change  Replace  Data Security  Software Security  Component Security  Connection Security  System Security  Human Security  Organizational Security  Societal Security  The group did make a recommendations from this list in question 3.  3.  Please enter any new or improved program outcome wording below.  More Details  1  Responses  Latest Responses  *"Social Engineering "* |
| 8. | Program Needs (partnerships, equipment and recruitment) |  |
| 9. | Other | Jon Tavassa motioned to adjourn and Bruce Curtis 2nd to adjourn.  Meeting adjourned at 3:15 |
| 10. | Next Meeting Date | TBD for next fall semester, Tim thinks early October |

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| ACTION ITEMS | | | |
|  | Action Item(s) | Owner | Target Date |
| 1. | Schedule fall 2020 advisory meeting | Tim Preuss | September 15, 2020 |
| 2. | Continue Program Outcome Review | Tim Preuss | Fall 2020 meeting |
| 3. |  |  |  |
| 4. |  |  |  |
| 5. |  |  |  |

**REMINDER:** Upload meeting minutes in the Employee Portal>Files and Forms>[Academic](https://employees.minnesota.edu/files/forms/?s=14)