Faculty Senate Minutes
9/23/2019
10-11 am
Mill Building 201

Present: Charie Faught (chair), Atish Mitra, John Ray, Phillip Curtiss, Katherine Zodrow, Stella Capoccia, Ulana Holtz, Peter Lucon, Ron White, Larry Smith, Laura Young, Chad Okrusch, Brian Kukay, Mary North-Abbott, Courtney Young, Karen Wesenberg, Doug Abbott

I.   Welcome and Minutes (https://www.mtech.edu/facultystaff/facultysenate/minutes/index.html)

Quorum @ 10:00am. Minutes of September 10, 2019 was presented for approval. **Motion to approve and seconded. PASSED.**

Action Items

II.   CRC Approval- PTC option in Interdisciplinary Arts and Sciences- see attached

Chad Okrusch presented on behalf of PTC. He reported that the PTC option has been thoroughly vetted at dept. and CRC level. The option is based on the IAS degree, with PTC stuff only at optional level. There are no proposed new courses, but elimination of several courses. Question from senator: with reduced faculty level, can PTC option be fulfilled? Reply (Chad Okrusch): yes, has been thoroughly discussed at dept level. **Motion to approve and seconded. PASSED.**

Informational Items

III.   Provost Search Committee

Stella Capoccia reported: Already had two open forums to get feedback from faculty/staff. Came up with a good list of desired qualities: (examples: Experience with tenure promotion etc, experience with leading colleges thru accreditation process, community focused, interested in being in Butte and at a small university, advocate for students.) Question from senator: What is the official name of the position? Reply: Provost and Vice Chancellor of Academic Affairs. (Two different hats – same candidate). Question from senator: how does the committee define the role of provost? Reply: at the moment, as per faculty-staff handbook. Will report more after PRA is available. Question from senator: Is the position tenurable? Comments from Provost: some candidates may negotiate tenure in the appropriate department. Comment from Senator: academic integrity should be mentioned.

IV.   September Board of Regents

Chair reported. The senate officers met at dinner with colleagues from other Montana schools. Issues raised: workload, adjunct pay. Discussion at the breakfast (the following morning) with BOR: main issue discussed was student recruitment and retention. Ideas raised by BOR members: maybe advising should carry more weight in tenure/promotion process. Comments from Senator: some NWCCU reports ask – what is the university doing to tackle retention? Chair: budget approved at BOR. Provost: some BOR members in a conundrum about current approval process. BOR doesn't have a lot of say till the day they are supposed to vote on it. There was discussion about BOR being removed from approval process, and approval done at OCHE level. Proposal: BOR reviews in every 3 or 5 years that the proposal reaches targets that they promised. Chair: next meeting in November in Bozeman.

V.   Activities and priorities for the upcoming year

   a.   Curriculum approval process

   Chair: Nothing new to report. Will create a guideline for deadlines.

   b.   Campus Committee Assessment

   Courtney Young: met with Scott Risser, will report after more progress. Chad Okrusch: offers to help to create a flowchart, info-graphics.

   c.   Teaching Community

   No updates.

   d.   Research Mentors

   Katherine Zodrow: proposal to change focus of research mentors.

   e.   Other-
      i.   Cyberinfrastructure

      Phil Curtiss reported on ongoing NRT grant proposal. At present there is a disconnect between existing infrastructure and what is needed. Project website to go live on 1st October 2019. Faculty is encouraged to engage with Phil if they are seeking data analytic facilities. Will give updates as things move forward. Used PowerPoint presentation (attached). Will continue speaking at next meeting.

      ii.   Technical Report Series

      No discussion

      iii.   Faculty Yearbook

      No discussion

VI.   Other Items

   a.   Faculty Accommodation

         No discussion

   Motion to adjourn, seconded.

MontanaTech

(Curriculum Change Request Form Dated 2 Feb 2017)

Date April 16, 2019
Dept. Professional & Technical Communication (PTC)
Program: Bachelor of Science in PTC

College CLSPS
CRC Representative: Chad Okrusch

Description of Request/Summary: As a result of the Program Prioritization process the BS in PTC, the MS in TC, and the PTC minor have been put into moratorium. Two tenured PTC faculty--Drs. Munday & Okrusch--have moved to the Liberal Studies Department. Upon the advice of the Dean of the CLSPS, and with the approval of the Liberal Studies Department (Friday April 12, 2019), we propose creating a PTC option within the existing Interdisciplinary Arts & Sciences (IAS) degree framework.

Current Course Program Information: N/A

Proposed Change

Course # Name	Credits	Pre-req.
See attached IAS: PTC Option curriculum worksheet Please note that the IAS: PTC Option was designed to use the IAS Core completely, and to integrate courses that Drs. Munday and Okrusch teach, in addition to leveraging courses already taught by Liberal Studies faculty, Drs. John and Roberta Ray, in particular. We are proposing no new courses.		

List of supporting documentation attached
See attached IAS: PTC Option curriculum worksheet

Assessment Leading to Request
The request is being made due to the Program Prioritization process, which includes final recommendations regarding the elimination of the PTC department and associated BS, MS, Certificates, and Minor.

Anticipated Impacts to "Other" Programs
I spoke with Michele Van Dyne, Department Head for Computer Science and Software Engineering regarding impacts to their programs. The Computer Science (CS) and Software Engineering (SE) BS degrees have included a number of PTC's courses within their curricular offerings. In particular, the Game Development focus includes: *New Media 1&2, Game Design, & Usability Testing.* The Technical Communication focus area includes: *Digital Video Production, New Media 1&2,* and *History of Technology, Communication, and Culture.* **Of these,** *New Media 1&2,* **and** *Digital Video Production* **will no longer be offered.** Dr. Okrusch may teach *Usability Testing* and Dr. Munday may teach *History of Technology, Communication, and Culture* schedules permitting. **Dr. Southergill has developed and taught** *Game Design,* **but he has been moved to the Writing Program fulltime so we cannot guarantee it will remain a viable offering.**

I spoke with Tim Kober, Department Head for Business and Information Technology. They have included two courses from our offerings in their curriculum: Introduction to Desktop Publishing and Introduction to Web Page Design. We have included these courses in our IAS: PTC option framework.

Impact on Library
No consultation required as no new courses are being proposed.

MontanaTech

Date to take Effect
AY 2019-20 (August 2019)

LEVEL of Request
Please indicate the type of request(s) by selecting *all that apply*:
Faculty Approvals (directly to CRC, then Faculty Senate):
- ☐ Establish a new course for the catalog (please contact the Registrar of MUS CCN information)
- ☐ Changed course: addition, deletion or change of title, credit, course number, pre-req, description, or cross listing.
- ☐ Amend an existing degree program. Making changes to programs such as adding a writing course to a major, changing the list of accepted electives or removing a requirement of a minor
- ☐ New degree certification of 29 credits or less
- ☐ Other:

Campus Approvals (must be approved by the VCAA prior to CRC submission):
- ☐ Placing a postsecondary educational program into moratorium
- ☐ Withdrawing a postsecondary educational program from moratorium
- ☐ Establishing, re-titling, terminating or revising a campus certificate of 29 credits or more
- ☐ Establishing a B.A.S./A.A./A.S. area of study
- ☐ Offering an existing postsecondary educational program via distance or online delivery
- ☐ Other:

OCHE Approvals *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
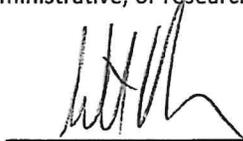- ☐ Re-titling an existing postsecondary educational program
- ☐ Terminating an existing postsecondary educational program
- ☐ Consolidating existing postsecondary educational programs
- ☐ Establishing a new minor where there is a major or an option in a major
- ☐ Revising a postsecondary educational program
- ☐ Establishing a temporary C.A.S. or A.A.S. degree program Approval limited to 2 years
- ☐ Other:

Level II *(must be approved by the VCAA and Chancellor prior to CRC submission)*:
- ☑ Establishing a new postsecondary educational program
- ☐ Exceeding the 120 credit maximum for baccalaureate degrees Exception to policy 301.11
- ☐ Forming, eliminating or consolidating an academic, administrative, or research unit
- ☐ Re-titling an academic, administrative, or research unit
- ☐ Other:

APPROVALS

Department Head Approval _____ Date 4/17/19

Dean Approval _____ Date 4/17/19

VCAAR Approval (see above) _____ Date _____

Chancellor Approval (see above) _____ Date _____

Graduate Council Approval _____ Date _____
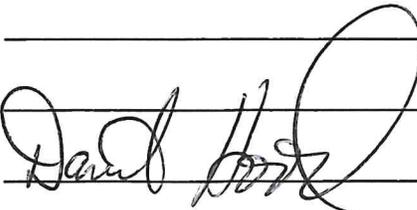
CRC Approval _____ Date 9/5/19

Faculty Senate Approval _____ Date _____

Proposed I.A.S. // PTC Option

WRITTEN COMMUNICATION (6 Credits)
Choose 1
- [ ] WRIT 101 - College Writing I
- [ ] WRIT 121 - Intro to Tech Writing
- [ ] WRIT 122 - Intro to Business Writing
- [ ] WRIT 201 - College Writing II

Choose 1
- [ ] WRIT 321 - Advanced Technical Writing
- [ ] WRIT 322 - Advanced Business Writing
- [ ] WRIT 325 - Writing in the Sciences
- [ ] WRIT 350 - Technical Editing

SPEECH COMMUNICATION (3 Credits)
- [ ] COMX 111 - Introduction to Public Speaking
- [ ] COMX 112 - Advanced Public Speaking
- [ ] COMX230 - Presenting Technical Information

LITERATURE & THE ARTS (6 Credits)
Choose 1
- [ ] FILM 103 - Introduction to Film
- [ ] LIT 112 - Introduction to Fiction
- [ ] LIT 126 - Introduction to Poetry & Drama
- [ ] LIT 210 - American Literature I
- [ ] LIT 211 - American Literature II
- [ ] LIT 223 - British Literature I
- [ ] LIT 224 - British Literature II
- [ ] LIT 231 - Ancient to Ren World Literature

Required
- [ ] LIT373W - Literature & the Environment

HISTORY (6 Credits)
Choose 2
- [ ] HSTA 101 - American History I
- [ ] HSTA 102 - American History II

HUMAN SCIENCES (6 Credits)
Choose 1
- [ ] ANTY 101 - Anthropology & the Human Experience
- [ ] PSYX 100 - Introduction to Psychology

Choose 1
- [ ] ANTY 315 - Forensic Anthropology
- [ ] ANTY 329 - Culture, Change, and Global Development
- [ ] PSYX 340 - Abnormal Psychology
- [ ] PSYX 360W - Social Psychology

PHILOSOPHY & POLITICAL THOUGHT (6 Credits)
Choose 1
- [ ] PHL 110 - Problems of Good & Evil
- [ ] PSCI 210 - Introduction to Political Science
- [ ] PSCI 250 - Introduction to American Government

Choose 1
- [ ] PHL 360 - History of Philosophy
- [ ] PHL 362 - History of Philosophy: Modern
- [ ] PSCI 438 - International Relations
- [ ] PSCI 465 - Public Administration & Policy
- [ ] PSCI 250 - Introduction to Political Theory

QUANTITATIVE REASONING
Choose 3 or more M or STAT courses from GENED list

FOUNDATIONS OF SCIENCE
Choose 3 or more approved science courses from GENED list, 1 w/ lab

OPTION IN PTC
WRITING (9 Credits)
Choose 1
- [ ] JRNL 272 - News Writing & Reporting
- [ ] WRIT 201 - College Writing II

Choose 2
- [ ] WRIT 325W - Writing in the Sciences
- [ ] WRIT 326W - Advanced Writing
- [ ] WRIT 350W - Technical Editing

DESIGN & PRODUCTION (9 Credits)
Choose 3
- [ ] COMX140 - Introduction to Visual Rhetoric
- [ ] PHOT154 - Exploring Digital Photography
- [ ] COMX338 - Usability Testing
- [ ] COMX348 - Introduction to Desktop Publishing
- [ ] MART341- Introduction to Web Design

COMMUNICATION HISTORY & CONTEXT (6 Credits)
- [ ] HSTR 207 - Science & Technology in World History
- [ ] COMX 442W - History, Technology, & Communication

COMMUNICATION THEORY & PRACTICE (6 Credits)
Choose 1
- [ ] COMX 310 - Group Dynamics Theory & Practice
- [ ] COMX 342 - Advanced Argumentation
- [ ] COMX 400 - Communication Theory
- [ ] COMX 441W - Rhetorical Theories & Criticism in Communication

Required
- [ ] COMX 415 - Intercultural Communication

CAPSTONE (6 Credits)
- [ ] COMX 498 - Internship
- [ ] COMX 499W - Thesis/Capstone

2018-2019 Catalog [ARCHIVED CATALOG]

Catalog Search

Search Catalog 🔍

Advanced Search

Catalog Home

Mission Statement

Academic Calendar

Graduation/Completion & Transfer Out Rates

Campus Security

The Institution

Admissions

Expenses

Student Life

Financial Aid

Academic Regulations and Requirements

General Education Requirements

Academic Programs

[ARCHIVED CATALOG]

Interdisciplinary Arts and Sciences, B.S.

⇦ Return to: College of Letters, Sciences and Professional Studies

Written Communication (6 credits)

Select 3 credits

- WRIT 101 - College Writing I 3 credits
- WRIT 121 - Introduction To Technical Writing 3 credits
- WRIT 122 - Introduction to Business Writing 3 credits
- WRIT 201 - College Writing II 3 credits

Select 3 credits

- WRIT 321W - Advanced Technical Writing 3 credits
- WRIT 322W - Advanced Business Writing 3 credits
- WRIT 325W - Writing in the Sciences 3 credits
- WRIT 350W - Technical Editing 3 credits

Speech Communications (6 credits)

Select 3 credits

- COMX 211 - Advanced Public Speaking 3 credits
- COMX 230 - Presenting Technical Information 3 credits

Select 3 credits

- COMX 310 - Group Dynamics Theory and Practice 3 credits
- COMX 314W - Business and Professional Speaking 3 credits
- COMX 317W - Interpersonal Communication Theory and Practice 3 credits
- COMM 4216 - Public Relations Practice & Management 3 credits
- COMX 400 - Communication Theory 3 credits
- COMX 415 - Intercultural Communication 3 credits

Literature and the Arts (6 credits)

Select 3 credits

- FILM 103 - Introduction to Film 3 credits
- LIT 112 - Introduction To Fiction 3 credits
- LIT 126 - Introduction to Poetry and Drama 3 credits
- LIT 210 - American Literature I 3 credits
- LIT 211 - American Literature II 3 credits
- LIT 223 - British Literature I 3 credits
- LIT 224 - British Literature II 3 credits
- LIT 231 - Ancient to Ren World Literature 3 credits
- LIT 232 - Modern World Literature 3 credits

Select 3 credits

- LIT 373W - Literature and the Environment 3 credits

History (6 credits)

Required

- HSTA 101 - American History I 3 credits
- HSTA 102 - American History II 3 credits

Human Sciences (6 credits)

Select 3 credits

- ANTY 101 - Anthropology & the Human Experience 3 credits
- PSYX 100 - Introduction to Psychology 3 credits

Select 3 credits

- ANTY 315 - Forensic Anthropology 3 credits
- ANTY 329 - Culture Change and Global Development 3 credits
- PSYX 340 - Abnormal Psychology 3 credits

Philosophy and Political Thought (6 credits)

Select 3 credits

- PHL 101 - Reason & Reality: Introduction to Philosophy 3 credits
- PHL 110 - Problems of Good & Evil: Introduction to Ethics 3 credits
- PSCI 101 - Introduction To Political Science 3 credits
- PSCI 210 - Introduction to American Government 3 credits
- PSCI 250 - Introduction to Political Theory 3 credits

Select 3 credits

- PHL 360 - History of Philosophy 3 credits
- PHL 362 - History of Philosophy: Modern 3 credits
- PSCI 438 - International Relations 3 credits
- PSCI 465 - Public Administration & Policy 3 credits

Quantitative Reasoning

Choose 3 or more courses from the General Education Requirements or approved M or STAT courses

Foundations of Science

Must have at least one laboratory course.

Choose 3 or more courses from the General Education Requirements or approved Science courses.

Career Planning

Concentrations in Interdisciplinary Arts and Sciences (36+ credits)

- Concentrations require a minimum of 36 credit hours.
- No more than 21 credits may be taken in a single discipline.
- The concentration must include 21 credits of 300 or 400-level courses.
- Students must submit an Interdisciplinary Concentration Proposal Form upon the completion of LS 1006. If approved by the IAS faculty, the student may proceed with the curriculum.

Capstone

- L.S. 4916 - Internship (at least 3 credits) **OR** L.S. 4986 - Undergraduate Research (at least 3 credits)
- L.S. 4956 - Special Topics (1 ore more credits)

Minimum Credits for a B.S. degree in Interdisciplinary Arts and Sciences: 120

The remaining courses required to achieve 120 credits are free electives.

Problem
0000000

Methodology
000

Activities
0000

Conclusion
00

Cyberinfrastructure Project - Cybercast

Faculty Seante Update
Department of Computer Science

Phillip J. Curtiss

Mtech F19 Senate

2019-09-23

Motivation for Reviewing Cyberinfrastructure

- Campus Received a Special Designation in May 2017 from the Board of Regents - STEM+Health

- Workgroup for Institutional Realignment for Excellence (WIRE) in March 2017 charged with "defining what it means for Montana Tech to be classified as the only Special Focus Four-Year University in the state."

    - Montana Tech should become more research active

    - Foster Collaboration within and between Departments on Campus

- National Academy of Science in two reports[1][2]

    - Data-Driven Science is the next era of discovery for Science Exploration - NSF funding NRT

---

[1] *Data Science for Undergraduates: Opportunities and Options*, CSTB, BMSA, CATS, BOSE, 2018-05-02

[2] *Opportunities from the Integration of Simulation Science and Data Science: Proceedings*, CSTB, 2018-07-31

Problem
○●○○○○○

Methodology
○○○

Activities
○○○○

Conclusion
○○

Cyberinfrastructure Conditions at Montana Tech

- Focus on Compute, Network, Storage

- Instructional Focus from Campus Technology Service (CTS)

- Equipment for Research Activities - Purchased through Sponsored Agency (NSF, NIH, etc.)

- Very little campus cyberinfrastructure for Research Activities

  - Sensor Networks - MBMG Project

  - NSF NRT Project - collaborative

  - SBIR Respiratory Monitoring Project - collaborative

Cyberinfrastructure Conditions at Montana Tech

- Specialized Hardware - loosely affiliated "centers"

- No IT Governance

- Few IT Policies

- No Impact to Cyberinfrastructure for new Research projects

- No Impact to Cyberinfrastructure for new Curricula

- Inadequate funding model to support Cyberinfrastructure

- Deficits in Human Capital to interface with Research Projects
  for Cyberinfrastructure

A Pathway toward Improvement and Modernization

- NSF Campus Cyberinfrastructure (CC*) Grant Project

  The Campus Cyberinfrastructure (CC*) program invests in coordinated campus-level networking and Cyberinfrastructure improvements, innovation, integration, and engineering for science applications and distributed research projects. Learning and workforce development (LWD) in Cyberinfrastructure is explicitly addressed in this program. Science-driven requirements are the primary motivation for any proposed activity.

Problem
⊙⊙⊙⊙●⊙⊙

Methodology
⊙⊙⊙

Activities
⊙⊙⊙⊙

Conclusion
⊙⊙

A Pathway toward Improvement and Modernizaiton

Five (5) different programs within the CC* funding opportunity:

- Data-driven networking infrastructure for campus and research activities
  $500k total for up to 2-years

- Regional connectivity for small institutions
  $800k total for up to 2-years

- Network integration and applied innovation
  $1M total for up to 2-years

- Campus computing and computing continuum
  $400k for up to 2-years

- Cyber-Team - Research and education CI-based facilitation
  $1.4M total for up to 3-years

Problem
○○○○○●○

Methodology
○○○

Activities
○○○○

Conclusion
○○

Success with NSF CC*

- Identify stakeholders across campus, community, MUS, region

- Identify best practices across campus CI needs

- Obtain from stakeholders information through a comprehensive multi-modal needs assessment

- Develop a CI plan for today - immediate needs; for 3-years out; for long-range 5-years out

  - Campus Network; Building Network; Wireless Network; Regional Network

  - Data Infrastructure; Highly Distributed; Highly Scalable; Centrally Managed; Fault Tolerant

  - Security Plan consistent with best practices, UM, MUS, and regional network operators

  - Research & Educational Compute Infrastructure

Success with NSF CC*

- Develop Data management plan for all stakeholder needs

- Develop a compute infrastructure plan for all stakeholder needs

- Develop a wireless infrastructure plan that meets all stakeholder needs

- Create an on-line mechanism for dissemination and updating all information gathered in a structured way and a means by which this information may be consumed by other (future) application needs

- Produce a forecasting model for different stakeholders

- Provide a sustainment impact

- Develop procedures and processes to ensure currency of all information

Montana Tech Approach

Develop a Sustainable Coordinated Campus-Wide
Cyberinfrastructure Plan through a Curated Data Collection
Methodology

Montana Tech Approach

1. Collect sufficient information to obtain a detailed understanding of current campus cyberinfrastructure capacity and capability and plans for growth;

2. Develop a project web site with sufficient tools to provide data collection and cataloging capabilities and reporting to facilitate project activities and disseminate information through a single information portal;

3. Develop a cyberinfrastructure impact score, mapping impacts on campus networking, campus computing, and campus storage. This score will be used to (i) trigger a detailed review of research proposals to better understand and plan for campus cyberinfrastructure impacts and (ii) as the source of a monetary rubric to obtain from a proposed project budget a sufficient amount of funding to support such impact at the campus level;
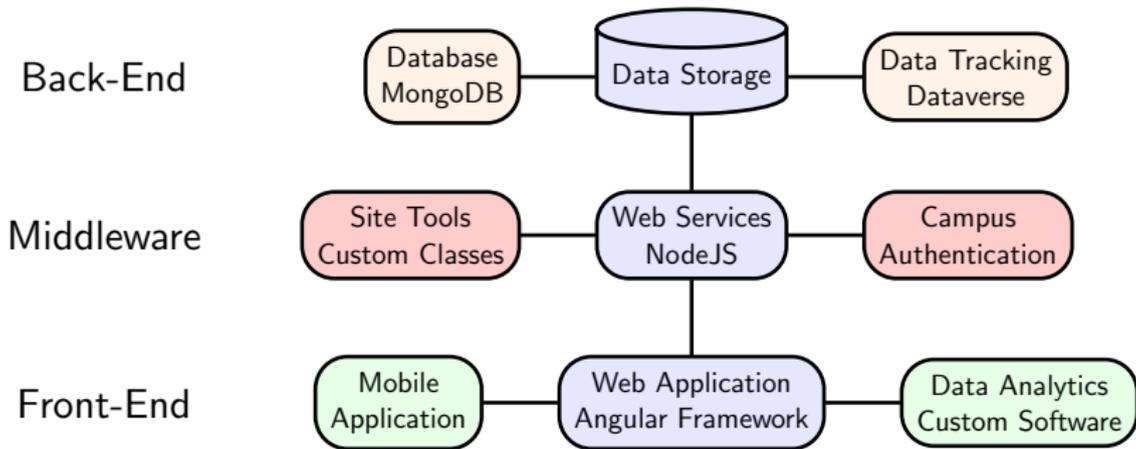
Problem
0000000

Methodology
00●

Activities
0000

Conclusion
00

Montana Tech Approach

Tenants of Approach:

- Curated CI information - Capturing Capability and capacity

- Flow equitable funding - based on impact score - to support CI activities

- Use curated CI information to *forecast* impacts upon proposed activities impacting CI

- Forecast growth impacts - budget, space, power, human capital - as CI assets increase

- Produce current reports on the state of Campus CI

Problem
0000000

Methodology
000

Activities
●000

Conclusion
00

Web Site - Cybercast

– Zachariah Valenzuela, 2018

Web Site - Cybercast

Back-End   Database MongoDB — Data Storage — Data Tracking Dataverse

Middleware   Site Tools Custom Classes — Web Services NodeJS — Campus Authentication

Front-End   Mobile Application — Web Application Angular Framework — Data Analytics Custom Software

Faculty Participation

- Make use of the Cybercast (ccast) web site to document existing research activities:

  - if you have an existing sponsored research project (data collection)

  - if you current have equipment or provide services in support of research (data collection)

  - if you are planning, or preparing a sponsored research project (forecasting)

  - if you are planning curricula changes (forecasting)

  - if you are seeking compute, data, network, facility support for instructional or research objectives (Direct CC* Grant)

- Please engage with me directly if you are:

  - if you are seeking compute, data, network, facility support for instructional or research objectives

Cybercast Web Site Anticipated Launch

Access to Web Site will be available starting October, 2019

Most Data Collections Tools will be On-line

Lots of information about the process and methodology will also be available

Forecasting tools will follow by about 1-month; provided data collection is active

Reports will begin to populate the site - in an RFC mode - about 1-month after forecasting; *Please review and participate in the request for comments (RFC) section on the reports - they will help us refine and shape the processes moving forward*

Problem
0000000

Methodology
000

Activities
0000

Conclusion
●○

Concluding Remarks

- Success will be predicated on ability to forecast

- Forecasting will be predicated on curated CI information

- New models for Research Office and Office of Sponsored Programs - money flow

- Formalize an IT Governance on Campus - Create Centers of Activities in some Formal Way

- CI must be a thought on the front-end of activities not the backend

- One-Shot at NSF CC* Proposal - must leverage the best possible

- Blending Research, Instructional, and Administrative Support on a single infrastructure is the challenge

Questions?

Phillip J. Curtiss, Associate Professor
Department of Computer Science, Montana Tech
pcurtiss@mtech.edu, 406-496-4807