Presentation on MIT AeroAstro Faculty Work Loads

Daniel Hastings & Steven Barrett
Department Head; Associate Department Head
State of the Department: Community
Our Faculty
People
- # tenure-line faculty: 37.5; # PIs: 50
- # PoP: 2
- # senior lecturer: 3
- # undergrads*: 178
- # grads*: 267 (103 SMs / 153 PhDs)
- # postdocs: 40
- # support staff: 16
- # admin staff: 8 (includes MPP AA)
- # finance staff: 5
- # program managers and technical: 5 (MPP, SSC, Space Grant, Dave, Todd)
- # research staff: 24
- # ancillary: 2 (NEET, faculty support outside AA)
Research on best practices for understanding faculty workloads
The Faculty Workload and Rewards Project

About the Project

• 5-year NSF-funded action research project.
• Enhance equity in the way faculty workload is taken up, assigned, and rewarded.
• 53 departments in 20 colleges and universities.

About the Intervention

• Workshop on Workload Inequality
• Create Work Activity Dashboards
• Identify and Implement Workload Policies
• Individual Professional Development on Faculty Time Management
The Faculty Workload and Rewards Project Team

Shared leadership and credit: I co-led the FWRP with Dawn Culpepper, Joya Misra, Audrey Jaeger, Elizabeth Beise with early assistance from Courtney Lennartz

Funded by the National Science Foundation
ADVANCE-IHE PLAN Project (1463898)
http://facultyworkloadandrewardsproject.umd.edu/
We found practices that make a difference!


### What We’re Aiming for: Equitable Workload Conditions

<table>
<thead>
<tr>
<th><strong>Transparency</strong></th>
<th>Widely visible information about faculty work activities available for departments members to see.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clarity</strong></td>
<td>Clearly identified and well-understood benchmarks for faculty work activities.</td>
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<tr>
<td><strong>Credit</strong></td>
<td>Recognition and rewards for faculty members who are expending more effort in certain areas.</td>
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<tr>
<td><strong>Norms</strong></td>
<td>A shared commitment to ensuring faculty workload is fair with systems that reinforce these norms.</td>
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<tr>
<td><strong>Context</strong></td>
<td>Acknowledgment that different faculty members have different strengths, interests, and demands that shape their workloads with workload flexibility to recognize this context.</td>
</tr>
<tr>
<td><strong>Accountability</strong></td>
<td>Mechanisms to ensure that faculty members fulfill their work obligations</td>
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</tbody>
</table>
What are our norms?
What are our norms?

• Each faculty member is expected to do research, teaching (including mentoring) and internal service.

• Each faculty member is expected to live our values (MIT and Department).

• Faculty members who are Full Professors are expected to do more service.

• Rough weighting for annual review:
  • Junior faculty (Asst, AWOT) - Research 50%, Teaching 30%, Service and Community contribution 20%.
  • Senior faculty (AWIT, Full) - Research 40%, Teaching 30%, Service and Community contribution 30%.

• MIT and each Department is a shared governance system and all faculty are expected to contribute.

• Faculty with major administrative roles may have reduced expectations on teaching.

Research norms

• We do research with UROPs, graduate students, postdocs and research scientists.

• The balance between these is up to the faculty member but all faculty are expected to have graduate students.

• For students who are graded (UROPs on grades, graduate students), we will provide them with candid feedback in a timely way.

• We will aim to meet with graduate students on a regular basis usually weekly.

• We will develop our postdocs according to a written mentoring plan.

• Faculty are expected to be available to serve on PhD committees outside of their students.

Community norms

• Faculty are expected to engage in their external professional community.

• Faculty are asked to proactively nominate colleagues for awards.

• Faculty are expected to attend faculty lunches, distinguished lectures, offsites and faculty search talks.
What are our norms?

• Teaching norms
  • We teach one class a semester on average
  • Each class should be approx. 12 units
  • We teach a given class for at least 3 years before we may rotate to another class
  • For UG classes, we will produce reflective memos at the end of each semester (for ABET)
  • Mentoring of students is recognized as part of our teaching. We will actively mentor our undergrads, grad students, postdocs and research scientists

• Service norms
  • We all need to advise some number of UG students
  • Junior faculty (Asst, AWOT) will usually serve on one Dept comm and not as chair
  • Senior faculty (AWIT, Full) are expected to serve on several Dept committees as well as MIT or SoE committees
  • Senior faculty may chair one or more committees
  • All faculty are expected to attend and do work on their committees
  • Faculty are expected to attend grades meetings
How will we follow the best practices?
How we follow the best practices

• Transparency
  • Faculty service on Dept committees will be posted to our website behind the firewall

• Clarity
  • Clearly understood benchmarks for faculty workload will be posted to our website

• Credit
  • Faculty service workload is an explicit part of promotion from AWIT to Full
  • Exceptional service will be recognized via merit based salary increases

• Norms
  • Norms will be posted and periodically discussed

• Context
  • Since different faculty have strengths in different areas (some are better teachers, some are better administrators etc), the Department Head will explicitly account for this in the annual review

• Accountability
  • For each faculty member, a discussion of contributions relative to the norms will be part of the annual review
  • Committee chairs can also give feedback to the Department Head on the contributions of a faculty member on a committee
## Committees (1/3)

<table>
<thead>
<tr>
<th>Name</th>
<th>Chair</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sector Heads</strong></td>
<td>Z. Spakowszky</td>
<td>S. Barrett (ADH), W. Harris (advising &amp; student support), J. Hoffman (outreach), Z. Cordero (outreach/FPOP), C. Fan (outreach/FPOP), B. Wardle (UROPs/internships), S. Hall, A. Lozano-Durán, B. Wardle; M. Drela Academic Program Administrator: M. Stuppard</td>
</tr>
<tr>
<td><strong>Undergraduate Committee</strong></td>
<td>Y. Marzouk</td>
<td>S. Barrett (ADH), Y. Marzouk, N. Leveson, Q. Wang, R. Radovitzky, O. de Weck, B. Williams, J. Peraire, E. Modiano, Graduate Program Administrator: L. Petrarca</td>
</tr>
<tr>
<td><strong>Grad Admissions Committee</strong></td>
<td>J. Peraire</td>
<td>S. Barrett (ADH), D. Hastings (DH), M. Win, D. Phillips (Diversity Officer), W. Harris, N. Leveson, K. Arquilla</td>
</tr>
<tr>
<td><strong>Diversity, Inclusion &amp; Innovation (Exec.)</strong></td>
<td>K. Cahoy</td>
<td>S. Barrett (ADH), D. Hastings (DH), M. Win, D. Phillips (Diversity Officer), W. Harris, N. Leveson, K. Arquilla</td>
</tr>
</tbody>
</table>
## Committees (2/3)

<table>
<thead>
<tr>
<th>Name</th>
<th>Chair</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awards</td>
<td>E. Greitzer</td>
<td>J. How, S. Widnall</td>
</tr>
<tr>
<td>Faculty Search</td>
<td>H. Balakrishnan</td>
<td>Z. Cordero, P. Lozano, W. Harris, E. Greitzer, J. How, S. Barrett (ADH)</td>
</tr>
<tr>
<td>Space</td>
<td>S. Barrett (ADH)</td>
<td>E. Greitzer, A. Zolnik, B. O’Conaill, O. de Weck, J. How, Y. Marzouk, Z. Spakovszky, D. Hastings (DH)</td>
</tr>
<tr>
<td>Dept. Leadership Team</td>
<td>D. Hastings (DH) and S. Barrett (ADH)</td>
<td>Sector Heads (Z. Spakovszky, D. Darmofal, O de Weck), Chair of the UG Committee (Y. Marzouk), Chair of the Grad Committee (J. How), Chair of DEI (K. Cahoy), Chair of the Faculty Search Comm (H. Balakrishnan)</td>
</tr>
<tr>
<td>Digital Education</td>
<td>S. Barrett (ADH) &amp; S. Hall</td>
<td>Q. Wang, O. de Weck, L. Carlone, C. Fan, D. Darmofal, E. Crawley, C. Guerra-Garcia</td>
</tr>
<tr>
<td>Digital Education Sub Committees</td>
<td>Chair</td>
<td>Members</td>
</tr>
<tr>
<td>----------------------------------</td>
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<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Digital Education – Micro SB</td>
<td>E. Crawley, W. Harris</td>
<td>S. Barrett, A. Lozano-Durán, R. Linares, S. Hall, E. Modiano, L. Carlone, K. Arquilla</td>
</tr>
<tr>
<td>Digital Education – Micro SM (autonomy)</td>
<td>J. How, S. Karaman</td>
<td>B. Williams, L. Carlone, H. Balakrishnan, J. Hansman, K. Cahoy,</td>
</tr>
<tr>
<td>Digital Education – Content</td>
<td>D. Darmofal, C. Guerra-Garcia</td>
<td>Q. Wang, S. Hall, E. Greitzer, R. Radovitzky, Z. Spakovszky, L. Carlone, L. Peterson</td>
</tr>
<tr>
<td>Digital Education – Resourcing</td>
<td>D. Hastings, S. Barrett</td>
<td>W. Harris, J. Peraire, O. de Weck, E. Crawley, D. Mindell</td>
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</tbody>
</table>
Summary
We are great department in a world-class institution – these explicit best practices will make us better

- A long history of leadership in aerospace
- A distinguished and energetic faculty
- New directions for the department
- Passionate students
- Exciting research
- Deep connections within MIT, with local partners and with strategic partners
- Many excellent facilities
- Committed to leading the aerospace profession!