CLASS GOALS

• To demystify the process of obtaining research grants by actually writing a grant proposal.
• To familiarize students with research grant preparation (learn grants basic).
• To get about 45 research proposals ready by the end of this semester (Hall of Fame!)
Why was this course proposed?

- Many graduate students are beneficiaries of their advisor’s Grantsmanship.
- Graduate students do write grant proposals sometime in their professional life.
- Most are unprepared step up to this challenge.
- Prospective employers would be impressed (hopefully!) to see Grants Writing Workshop in your curriculum vitae and transcripts.
- No such course was regularly offered at MTU.
- (see: Valorie’s site at http://www.sos.mtu.edu/gsc/funding.htm)
The response was amazing!!

• 45+ students registered for this course.
• They came from everywhere on campus (engineering, biology, forestry, chemistry, physics and biomedical engineering).
• Only one undergrad senior came in! (Nov?)
• Now, I have to deliver what has been promised.
Who is your instructor?

• Shekhar Joshi (Chandrashekhar P. Joshi)
• Associate Professor, SFRES
• Over 14 years of grants writing experience
• Received NSF CAREER grant in 2002
• Currently PI/Co-PI on ~$5 million grants
• Have been involved in ~$8 million at MTU
• But have written worth $25 million grants
• Practice makes a person perfect!
Where and when can you find me?

• Room # 167, Forestry Building
• I am available between 9 am to 6 pm on all weekdays except MWF 11-12 noon and Thursday 1-2 pm when I teach.
• Phone: 487-3480
• Email: cpjoshi@mtu.edu
• Web site: http://forest.mtu.edu/faculty/joshi/
• Do call me or email me before walk up the hill!
More help is here!!

- Valorie Troesch
  Director of Development
  Research & Graduate School
  Rm. 317B Administration Bldg.
  (906) 487-2906
  vtroesch@mtu.edu
  Research & Fellowship Proposal Assistance
A lot is already being done on MTU campus!

- **Research & Fellowship Proposals**
- In an effort to enhance student funding and professional development, the Research office and the Graduate School are offering assistance to *faculty and students* who are interested in submitting funding proposals. If you are not submitting proposals for funding because you were unaware of opportunities relevant to your research, let us help.
  - Identify funding opportunities (government, foundations, corporate)
  - Develop proposal ideas
  - Coordinate crosscutting collaborative projects
  - Write and edit proposals
  - Make sure your proposal contains everything required to be competitive
  - Manage the submission process so you meet deadlines & get the proposal in the mail
- Valorie has helped in getting *>7.5 million* in federal funding to MTU
Main objective!

- To prepare a complete research grant application in the NSF format.
  - Choose a topic of your choice
  - Research the idea that you want to propose
  - Write project description and summary
  - Do all the paperwork!
  - Submit the completed proposal by week 12
  - Help me in evaluating your peers (more later!)
Why NSF?

• Gold standard in research
• Basic research with applied outlook
• Fastlane: https://www.fastlane.nsf.gov/fastlane.jsp
• Virtually all sciences are included as program areas
  – Find out which programs could fund your proposal.

http://www.nsf.gov
How will proposals be evaluated?

- Group of 5 students from same discipline
- One will be selected as panel manager (PM)
- Your professors will be invited to review it
- Valorie and I will participate as outsiders
- Panel meetings will be on one Saturday
- In the last class, Panel Manager will present main ideas and panel review.
- You will not evaluate your own proposal!
Grading system

• Two major categories
  – 50% Class attendance, participation, assignment submission and completeness of final proposal: Joshi
  – 50% Your peers and Professors

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>95-100%</td>
<td>Outstanding: must fund</td>
</tr>
<tr>
<td>AB</td>
<td>90-94</td>
<td>Excellent: high priority</td>
</tr>
<tr>
<td>B</td>
<td>85-89</td>
<td>Very Good: medium priority</td>
</tr>
<tr>
<td>BC</td>
<td>80-84</td>
<td>Good: low priority</td>
</tr>
<tr>
<td>C</td>
<td>75-79</td>
<td>OK: Some merit</td>
</tr>
<tr>
<td>CD</td>
<td>70-74</td>
<td>BAD: Why did you waste time?</td>
</tr>
<tr>
<td>D</td>
<td>65-69</td>
<td>Very BAD: Do not fund!</td>
</tr>
</tbody>
</table>
Syllabus

• Week 1: Overview of course objectives
• Week 2: Grant proposal guide (NSF)
• Week 3: Defining Project aims
• Week 4: Project description
• Week 5: Methodology and summary
• Week 6: CV and other supporting docs
• Week 7: Successful Grant Writers meeting
Syllabus (..continued)

• Week 8: Budget preparation, paperwork
• Week 9: Q and A with Grad school/RS
• Week 10: Other federal agencies
• Week 11: Foundations and Industries
• Week 12: Checklist for complete proposal
• Week 13: Review process
• Week 14: Panel presentations
Textbook?

• No textbook is prescribed!
• Tons of material on the World Wide Web!
• Most of it is for public service and not suitable for research!
• Grants writing for Dummies: B. Browning
• Grant writing Book: E. Karsh and A. Fox
• Guide to Grant Success: C. Knowles
• Experience is the best teacher!
Assignments

- Even though this class has only 1 credit and we will meet only once per week, you may have to work at least 2-3 hours extra on your own. It will start slow but will be overwhelming very soon.
- Please give me your completed survey today!
- Next class submission: Choose three research topics and write one paragraph each about why you want to write a proposal on these topics in layman’s terms in the order of preference.
Who gives you the grant?

- Public
- Government
- Funding agency
- Program manager
- Panel manager
- Review Panel
- Peers
Who gets the grant?

- Your institution
- You as a caretaker person (10-20% Success rate)
- You build reputation for you and institute
- Success follows success and failure.
- Only established people?
- No, young investigators have better shot!