

STEM Career Development

STEM Internships & Research Experiences
+
STEM Transfer Pathways

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Montgomery College
Science, Engineering and Mathematics

Internships & Research Experiences

- MC STEM students achieve internship or research opportunities upon A.S./transfer
- Increasing number of current students pursuing internships/research opportunities
- Provide information SEM Internships site:
<http://cms.montgomerycollege.edu/seminternships.aspx>
- Inform employers about quality of MC STEM students & need for internships/research



Internships/Research A.S./Transfer

- Federal government agencies & laboratories
 - [NIST SURF](#), [NIH CCSEP](#), [FAA](#), [DOE CCI](#), [NASA](#), [LSAMP](#)
- Large & small companies, profit & non-profit
 - [JCVI](#), [SFC Energy](#), AWLAN, [Intelsat](#)
- Research Experience for Undergraduates
 - [NSF - UMCP](#), [Wayne SU](#), [FAMU/FSU](#); [HHMI at Georgetown](#)



Current Student Internship & Research

- MC faculty-sponsored research
 - Student-centered (SC297) & faculty research
- Biomedical scholars program placements
 - NIH, UMCP, [BRNI](#), QBI, Virion - Dr. Barbara Hoberman
 - [SmartSenseCom](#), [Patton Electronics](#),
- [Engineering club](#) and faculty projects
 - IEEE and [Engineers Without Borders](#) student chapters
 - Signal processing lab, robotics, [nanotechnology](#)



Developing Opportunities

- Opportunities upon completing first year
- Government
 - Naval Surface Warfare Center, NIH, NIST, FAA, DOE
- Industry
 - Robotic Research, JCVI,
- Universities
 - [UMCP SEEDS NSF STEP Grant](#), UMBC, JHU



Placements for Summer 2013

- [NIH CCSEP](#) – 3 – biomedical research
- [NIST SURF](#) - 5 – engineering, biology, cybersec
- SmartSenseCom – 2 – fiber optic sensors
- [J. Craig Venter Institute](#) – 1 biomedical research



Pending for Summer 2014

- Aeras Global - chemistry
- Howard Hughes Medical Institute – biomedical
- Naval Surface Warfare Center – engineering, compsci
- NIH - biomedical
- NIST, Gaithersburg – engineering, compsci
- SmartSenseCom – fiber optic temp sensors
- UMCP, Center for Minorities in Science and Engineering
- Federal Aviation Administration – engineering, compsci
- U.S. Department of Energy - engineering



STEM Transfer Advising

- Development of Engineering Advising web site
 - <http://cms.montgomerycollege.edu/engineeringadvising.aspx>
- Dedicated Engineering/STEM Advisor
 - Dr. Day – part-time office hours – two days
 - Germantown and Rockville
- Model for advising content & student support
 - GT STEP grant provides resources for expansion
 - STEM advising web site in development



STEM Transfer Pathways

- Focus NSF STEP grant partners
 - UMCP, UMBC, Universities at Shady Grove
- Other state universities and colleges
 - Capitol College, Frostburg, Towson, Morgan
- Regional universities and colleges
 - WVU, UDC, GWU, VCU
- National universities and colleges
 - Georgia Tech, Purdue, Syracuse



NSF STEP Grant Partners

- UMCP, UMBC, Universities at Shady Grove (USG)
- Already receive majority of MC transfers
- Strengthening STEM curriculum alignment
- USG Biomedical Sciences & Engineering Education Building – 2018
- 14 additional STEM/Allied Health degree programs
- UMCP, UMBC, University of Maryland Baltimore



Questions?

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