Sharks take a Bite out of Infection!

Antimicrobial Engineered Microtopography Development to Reduce the Spread of Pathogens in Medical Facilities

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Method 1: Antimicrobial Microtopographic Synthesis

Method 2: Antimicrobial Rosette Bandage Synthesis

Results 1: Determination of the Efficacy of Shark Skin

Results 2: Antimicrobial Rosette Bandage Testing

Conclusions

Quantification of Fouling on Shark Skin
1. After 72 h, control petri dishes had 98% biofilm cover, while shark skin had <3% after the entire 120 h experimental period (Figures 7–20).

Shark Skin Inspired Surfaces
1. Higher ERI is positively correlated to lower CFU counts across surfaces tested.
2. Engineered POM Se microtopography had less total CFU counts on each of the various surfaces tested with S. aureus (Figures 7–20).
3. The denticulate micro pattern of shark skin can be applied to inhibit biofilm development key to fouling and the development of SSIs and HAIs in medical facilities.

Future Steps
1. Wound colonization is typically polymicrobial, therefore testing with multiple types of bacteria is necessary.

Acknowledgements and Selected References

Hank Dr. Marianne Porter, Research Laboratory for Antimicrobial Engineering
The Next QEP

Multiple Academic Credentials for Workforce Competencies

Focus:
Career Readiness Across and Beyond the Curriculum
What Employers Say…

• 80% say it is difficult to find recent graduates who are qualified without retraining skills that were supposed to be learned in school\(^1\)

• *Only 11% of business leaders and only 14% of the public think that university graduates have the skills to succeed in the workplace*\(^2\)

\(^1\)Florida Council of 100 (2018). https://www.fc100.org/
## FAU Surveys

<table>
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<tr>
<th>Competency</th>
<th>Employer Rating*</th>
<th>Faculty Rating*</th>
<th>FAU Graduates Achievement*</th>
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*Rating of 1 = “Very important” on a 4-point Likert scale
NACE Career Readiness Competencies
Seamless Alignment with SACSCOC Objectives

- Content/Discipline Knowledge
- Communication Skills
- Critical Thinking Skills
- Diversity, Equity & Inclusion
Race to Excellence

• Cultivating discovery, diversity and distinction
• Culture of student success
  • Undergraduate Research
  • Graduate Placement
  • Non-degree seeking students
  • Non-traditional students
  • Transfer students

Imagine FAU graduates being the most sought after talent for our growing community and beyond.
Focus: Career Readiness Across and Beyond the Curriculum

CAREER CENTER

Professional Development

Curricular Frameworks

Community Engagement

FLORIDA ATLANTIC UNIVERSITY
• Faculty/Staff Learning Communities
  - Inclusive instruction
  - Student development theory
  - Diversity, equity & inclusion

• Engagement at all levels
  - Faculty/staff
  - Instructors, Adjuncts, Guest lecturers, Industry experts/employers, TA’s and SI leaders
• Guest lecturer/project mentor clearinghouse
  • Recruit a pool of diverse alumni, community leaders/employers
  • Create program-specific external advisory councils
  • Expose students/faculty to employers that look like them

• Create learning communities dedicated to interacting with this group for curriculum enrichment
• Career Champions Network
  • Faculty liaisons from each college
    • A&L, BUS, EDU, ENG, GRAD, HON, MED, NUR, COS, SW&CJ, UG, Library
  • Academic Support Services representation
    • Career Center, Advising, International Programs, Community Engagement, OURI, eLearning, Continuing Ed, Residence Life, Center for Teaching and Learning, Student Athlete Success Center, Council of Student Organizations, Alumni Association

• Curriculum Enhancement Grants: 1st year and transfer cornerstone sequence

• Mini-Credentials: Targeted cross-college certificate programs
Curriculum Enhancements

• **The capstone** is the culminating course experience that ties the major together

• **The keystone** is the gatekeeper course where performance indicates likelihood of degree completion

• **The cornerstone** is a multi-semester sequence that lays the foundation for career readiness exploration and student success (that also counts toward the major)
Career in the Curriculum

- IFP Thematic Clusters
- First year bridge programs
- FTIC
- Transfer students
- First generation
- New graduate students
- Non-degree seekers
- Non-traditional students
Accumulate career readiness micro-credentials to give graduates a competitive advantage

- University-wide certificates
  - Exploratory: IFP Thematic Clusters
  - Skill-Building: Keystone
  - Intensive: Designated courses or capstones
Transcripts

- Stack micro-credentials on transcripts and CV
- *Future-proof resumes with skills employers want*
• Infuse more faculty interaction via the Career Champions Network
• Provide artificial intelligence tools to expand access
• Enhance data mining from multiple sources to provide critical insights
• Enhance student internships program
• Establish a peer consultants program
Daniel, grow your skills and advance your career with LinkedIn Learning

Lynda.com®

Become a Manager

As a manager, success is predicated on your ability to achieve goals working with your team. The good news is that management is a skill that can be learned. This path is designed to provide you with the key considerations, skills and competencies to help you become and succeed as a manager.

You’ve completed this learning path and picked up 9 course certificates along the way. Share your accomplishment and stand out in a sea of competition for your next role.

Post To My Profile
“Who wants a job?”
The Next QEP

Multiple Academic Credentials for Workforce Competencies

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