TECHNICAL SKILL SET Courses

TE 301. Creativity and Systematic Innovation Methods (3 credits)
Creativity methods, anthropological research, painstorming, bisociation, the Kano model, the trimming technique, nonlinear design, parameter analysis, decomposition, DeBono’s Six Hats technique, biomimicry, lateral benchmarking, Blue Ocean Strategy, the art of tinkering and other innovation methods. Hands-on labs, individual and team projects.

TE 302. Methods in Visual Thinking (2 credits)
Visualization techniques, visual thinking and envisioning information as taught by Edward Tufte and others, multimedia tools and methods. Appropriate use of technology as applied to new product development (no programming required).

TE 303. Methods in Prototyping, Modeling and Testing (2 credits)
Generation of mock-ups and looks-like prototypes, electro-mechanical optical bread-boards design, fabricate, build and test multiple generations of prototypes, computer modeling methods, shop methods, testing, sensors and data collection.

TE 407. Intellectual Property Creation and Management (2 credits)
Intellectual property issues: confidentiality, nondisclosure, agreement not to compete, founders agreements, patents, copyrights, trademarks, trade secrets both domestic and international.

PRODUCT DEVELOPMENT & ENTREPRENEURSHIP MINDSET Courses

TE 401. Integrated Product Development (IPD) Process - 1 (3 credits)
An integrated and interdisciplinary approach to engineering design, concurrent engineering, design for manufacturing, industrial design and the business of new product development. Topics include design methods, philosophy and practice, the role of modeling and simulation, decision making, risk, cost, material and manufacturing process selection, platform and modular design, mass customization, quality, planning and scheduling, business issues, teamwork, group dynamics, creativity and innovation. Case studies and semester-long team projects.

TE 402. Integrated Product Development (IPD) Process - 2 (3 credits)
Continuation of TE 401, the parallel development of the product, the development of the marketing and manufacturing system, manufacturing and marketing launch, sales, service and customer support. Case studies and semester-long team projects. Prerequisites: TE 401.

TE 403. Entrepreneurial Startup Process - 1 (3 credits)
Key issues surrounding company startups, including feasibility analysis, business model development and evaluation, formation of new venture teams, financial forecasts, sources of financing. Readings, financial templates, live case studies and guest entrepreneurs.

TE 404. Entrepreneurial Startup Process - 2 (3 credits)
Continuation of TE 403, integration of key business components to form and launch your venture: industry analysis, marketing plan and sales strategy; mobilization of the new venture team; operations, including space, legal and insurance conspiracy; and financial management. Selected topics related to respective venture types (i.e., social entrepreneurship, family business, franchising, immigrant entrepreneurs). Lectures, workshops and guest entrepreneurs. Prerequisites: TE 403.

TE 450. Intrapreneurship - 1 (3 credits)
Intrapreneurship is the process of developing and commercializing innovative new products and business models within established companies. The intrapreneur must have some of the talents of an entrepreneur but requires additional skill sets to leverage the existing ecosystem within their company. This course will examine the skills required to be a successful intrapreneur using case studies describing successful intrapreneurs and the companies that have supported/benefited from them. This course will be valuable for anyone wanting to promote innovation and growth within their company.

TE 451. Intrapreneurship - 2 (3 credits)
Under development.
## SPRING 2018 Schedule

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 407</td>
<td>Intellectual Property (IP) Creation and Management</td>
<td>2</td>
</tr>
<tr>
<td>TE 450</td>
<td>Intrapreneurship - 1</td>
<td>3</td>
</tr>
<tr>
<td>TE 301</td>
<td>Creativity and Systematic Innovation Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

## FALL 2018 and SPRING 2019 Schedule

<table>
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<tr>
<th>Course</th>
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<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>TE 407</td>
<td>Intellectual Property (IP) Creation and Management</td>
<td>2</td>
</tr>
<tr>
<td>TE 403</td>
<td>Entrepreneurial Start-Up Process - 1</td>
<td>3</td>
</tr>
<tr>
<td>TE 404</td>
<td>Entrepreneurial Start-Up Process - 2</td>
<td>3</td>
</tr>
<tr>
<td>TE 303</td>
<td>Methods in Prototyping, Modeling and Testing</td>
<td>2</td>
</tr>
</tbody>
</table>

Special arrangements for companies with 10 or more students available. Call for details.

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## NEXT STEPS

1. **Apply online**: [www.lehigh.edu/innovate](http://www.lehigh.edu/innovate)
   - Click on APPLY NOW
   - Create an account with personal information
   - Select Masters of Engineering in Technical Entrepreneurship
   - Select part-time
   - No GRE's are required
   - Provide transcripts and two recommendations

2. **Speak with the TE Outreach Manager**: Contact Lauren Purdom, TE Outreach Manager at lep215@lehigh.edu or (610) 758-4824.

3. **Visit**: Come to campus to experience the dedicated facilities, faculty and curriculum and meet with current students. Contact Lauren Purdom to arrange your personal visit.

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“Companies see you as an asset when you can bring your entrepreneurial skills and help build their company.”


“One major takeaway from the TE program is the importance - and the universality - of the entrepreneurial process. Products vary, but the process applies.”

-Tony Bagdon ‘14G, Technical Project Manager, Industry Dive

“Lehigh’s M.Eng. in TE program offers students a terrific platform for learning. The investment I made in this degree has already paid valuable career dividends.”

-Fred Carter ‘14G, ASI Lead Engineer, DMG MORI USA