



# 5 PILLARS



**PERSONAL DEVELOPMENT**



**INTERPERSONAL RELATIONSHIPS**



**MANAGEMENT & TEAMWORK**



**LEADERSHIP**



**INTERCULTURAL COMPETENCE**

## JHLP Leadership Capabilities

The Jerry Holmes Leadership Program provides students with developmental experiences designed to enhance their abilities in five domains: personal achievement, interpersonal relationships, management and teamwork, leadership, and intercultural understanding. Specific skills are associated with each domain. This document incorporates many elements of the *RCEL Engineering Leadership Certificate Handbook* published by the Rice Center for Engineering Leadership, Rice University.\* Their assistance and generosity are greatly appreciated. We also gratefully acknowledge the work of the Bernard M. Gordon-MIT Engineering Leadership Program and the Institute for Engineering Leadership Education at the University of Toronto.

### The Personal Domain

Capability	Components
<p><b>1. Developing self-awareness</b> – an ability to understand oneself and one’s aspirations and possibilities</p>	<ul style="list-style-type: none"> <li>• Develops an accurate and practical understanding of “who I am” and “who I can become”</li> <li>• Knows personal strengths, constraints, and development opportunities</li> <li>• Practices self-control</li> <li>• Develops self-confidence</li> <li>• Routinely seeks out and receives feedback from others</li> <li>• Knows one’s basic needs, motivations, and values</li> <li>• Possesses intellectual humility</li> <li>• Strengthens one’s ethical values and principles</li> </ul>
<p><b>2. Setting and achieving goals</b> – knowing how to set personal goals, allocate resources accordingly, monitor progress, and achieve results.</p>	<ul style="list-style-type: none"> <li>• Has a personal and professional vision</li> <li>• Sets SMART goals</li> <li>• Takes initiative</li> <li>• Plans, monitors, and manages goal achievement</li> <li>• Develops drive, perseverance, and resourcefulness</li> <li>• Achieves measureable results and learns from the process</li> </ul>
<p><b>3. Problem-solving and decision-making</b> – the ability to make effective decisions using rational and creative methods</p>	<ul style="list-style-type: none"> <li>• Understands common decision-making heuristics and biases</li> <li>• Defines problems, generates alternatives, evaluates alternatives, implements solutions</li> <li>• Is comfortable with ambiguity; does not rush to reach a decision</li> <li>• Makes decisions with confidence</li> <li>• Practices practical ingenuity</li> <li>• Practices open-mindedness</li> <li>• Learns from problem-solving experiences</li> <li>• Builds capacity for creativity and innovation</li> </ul>
<p><b>4. Building technical and financial expertise</b></p>	<ul style="list-style-type: none"> <li>• Developing technical skills that distinguish one from one’s peers</li> <li>• Developing a working knowledge of business finance</li> </ul>

\* For the sake of readability, excerpts from the RCEL Handbook are not indicated by quotations.

## The Interpersonal Domain

<b>Capability</b>	<b>Components</b>
<b>5. Practicing good followership</b> – Being a positive, productive, and sometimes outstanding individual contributor	<ul style="list-style-type: none"> <li>• Assesses current commitments and allocates time and effort to make a positive and productive impact</li> <li>• Knows how to discover what is expected for strong results</li> <li>• Delivers outstanding results</li> <li>• Knows when to step back and allow another person to take the lead</li> <li>• Actively contributes to the group decision-making process</li> <li>• Supports the group leader</li> <li>• Challenges the status quo, especially when it is the “right thing to do”</li> </ul>
<b>6. Building positive relationships</b> – The ability to initiate, create, and maintain mutually satisfying and beneficial relationships and social ties	<ul style="list-style-type: none"> <li>• Develops perceptivity regarding others’ emotions and social styles</li> <li>• Builds mutually satisfying and beneficial relationships</li> <li>• Acts with compassion</li> <li>• Builds trust and credibility</li> <li>• Assesses current networks for personal and professional purposes</li> <li>• Builds and manages networks</li> <li>• Speaks and acts with civility; promotes an environment of civility</li> </ul>
<b>7. Practicing inclusivity</b>	<ul style="list-style-type: none"> <li>• Speaks and acts in ways that affirm the value of all people</li> <li>• Promotes fairness</li> <li>• Encourages input from all group members</li> <li>• Understands how historical practices influence participation</li> <li>• Deploys strategies to build an inclusive organization</li> <li>• Acts as an ally for people who may feel excluded</li> </ul>
<b>8. Collaboration</b>	<ul style="list-style-type: none"> <li>• Works effectively within a group to accomplish the group’s goals</li> <li>• Facilitates good teamwork processes</li> <li>• Deploys strategies for capturing, discussing, and evaluating ideas</li> <li>• Uses established techniques to manage group discussions</li> <li>• Makes sure all members of a group feel free to contribute</li> </ul>
<b>9. Managing conflict and negotiation</b> – The ability to experience and manage differences in constructive ways	<ul style="list-style-type: none"> <li>• Diagnoses sources of conflict</li> <li>• Manages emotions surrounding conflict</li> <li>• Understands one’s preferred conflict management approach</li> <li>• Matches appropriate conflict management approaches to conflict situation</li> </ul>
<b>10. Communicating effectively</b>	<ul style="list-style-type: none"> <li>• Chooses appropriate communication strategies</li> <li>• Crafts the message to fit the audience</li> <li>• Designs effective visual aids</li> <li>• Is confident and articulate when speaking in public</li> <li>• Uses effective written communication practices</li> </ul>

## The Management and Teamwork Domain

<b>Capability</b>	<b>Components</b>
<b>11. Organizing</b> – Designing and developing a structure to achieve desired results	<ul style="list-style-type: none"> <li>• Identifies needs and requirements*</li> <li>• Creates an overall structure of shared responsibilities and interrelationships</li> <li>• Creates individual role requirements, responsibilities, and expectations</li> <li>• Establishes processes for transition and succession</li> </ul>
<b>12. Working in a team</b>	<ul style="list-style-type: none"> <li>• Effectively composes and launches project teams</li> <li>• Coordinates the efforts of team members</li> <li>• Stays aware of the actions of other team members</li> <li>• Engages in backup behavior as needed</li> <li>• Documents team practices and processes; stores and disseminates information appropriately</li> <li>• Encourages shared leadership practices within a team</li> <li>• Promotes team-level learning</li> <li>• Acts in ways that promote and improve the team’s overall capacity for leadership</li> </ul>
<b>13. Staffing</b> – Assessing and selecting individuals for specific roles	<ul style="list-style-type: none"> <li>• Identifies the skills needed to meet the team’s objectives</li> <li>• Assesses the skills and interests currently possessed by team members</li> <li>• Recruits and selects people for roles, based on team needs and individuals’ interests and strengths</li> </ul>
<b>14. Managing projects</b>	<ul style="list-style-type: none"> <li>• Understands principles and tools of project management</li> <li>• Creates plans to achieve goals and objectives in accordance with the organization’s vision</li> <li>• Implements and updating plans to achieve desired results</li> <li>• Coordinates group members’ efforts</li> <li>• Understands budgeting; can manage financial resources</li> <li>• Can deliver a project on time, on budget, and to specification.</li> </ul>
<b>15. Training &amp; mentoring</b>	<ul style="list-style-type: none"> <li>• Shares knowledge and expertise with others</li> <li>• Coaches others</li> <li>• Mentors younger or less-experienced students</li> </ul>
<b>16. Empowering and delegating</b> – Enabling others to have the authority, control, and voice in achieving shared objectives and making group decisions	<ul style="list-style-type: none"> <li>• Diagnoses situations where empowerment or delegation is appropriate</li> <li>• Deploys strategies for enabling others to become empowered and confident in their roles</li> <li>• Uses delegation strategies appropriately in decision-making situations</li> <li>• Employs good follow-up practices</li> <li>• Practices effective group decision-making</li> </ul>

\*Fleishman et al., 1991

## The Generative Leadership Domain

<b>Capability</b>	<b>Components</b>
<p><b>17. Creating a shared vision –</b> Creating and implementing a shared vision, goals, &amp; objectives for achieving these aspirations</p>	<ul style="list-style-type: none"> <li>• Defines purpose, goals, and strategies</li> <li>• Creates awareness of strategic context or environment (sense-making)</li> <li>• Creates a shared vision and mission</li> <li>• Translates mission into goals, objectives, and measures of success</li> </ul>
<p><b>18. Motivating and inspiring others –</b> Creating an environment that enhances the ability, motivation, and opportunities among members to achieve outstanding results</p>	<ul style="list-style-type: none"> <li>• Communicates a clear and meaningful vision</li> <li>• Understands intrinsic and extrinsic motivation</li> <li>• Builds a work environment that fosters intrinsic motivation</li> <li>• Uses rewards and recognition appropriately to enhance motivation</li> <li>• Uses rhetorical strategies to enhance the effectiveness of communications</li> <li>• Diagnoses performance problems</li> <li>• Deploys appropriate strategies for resolving performance problems</li> </ul>
<p><b>19. Adapting leadership styles –</b> Using a repertoire of different leadership styles to meet the specific situational requirements</p>	<ul style="list-style-type: none"> <li>• Understands and relates to people as individuals</li> <li>• Understand one’s natural or preferred leadership style</li> <li>• Selects behavioral strategies to meet specific situational needs (i.e., balancing a focus on relationships versus delivering results).</li> </ul>
<p><b>20. Building power and influence –</b> Understanding the existence and necessity of power and building power for ethical and shared purposes. The ability to gain others’ attention, commitment, and cooperation.</p>	<ul style="list-style-type: none"> <li>• Understands the relationship between power and influence</li> <li>• Diagnoses sources of personal, positional, and nonpositional power and influence</li> <li>• Diagnoses situations to select appropriate influence strategy</li> <li>• Knows how to influence upwards</li> <li>• Builds and manages personal sources of influence</li> <li>• Manages positional sources of power</li> <li>• Knows how to convert power into influence</li> </ul>
<p><b>21. Boundary Spanning –</b> “politically oriented communication that increases the resources available to the team and networking communication which expands the amount and variety of information that is available to the team”*</p>	<ul style="list-style-type: none"> <li>• Works with stakeholders, suppliers, sponsors, and other organizations to increase the group’s personnel, material, and/or financial resources</li> <li>• Understands the political environment of the larger organization</li> <li>• Builds connections between one’s group and other groups</li> </ul>
<p><b>22. Leading change –</b>Creating and implementing positive and lasting change</p>	<ul style="list-style-type: none"> <li>• Identifies a need for change</li> <li>• Imagines new possibilities</li> <li>• Works with others to effect change</li> <li>• Becomes comfortable with the chaos associated with change</li> <li>• Creates and implements a process for sustaining improvements</li> </ul>

\* Burke et al., 2006

## The Intercultural Domain

Capability	Components
<b>23. Understanding cultural dimensions of leadership</b>	<ul style="list-style-type: none"> <li>• Recognizes the influence of culture on the understanding of leadership</li> <li>• Can identify leadership attributes that are common across cultures</li> <li>• Can identify leadership attributes that are culturally conditioned</li> </ul>
<b>24. Intercultural communication</b>	<ul style="list-style-type: none"> <li>• Understands the communication patterns characteristic of high-context and low-context cultures</li> <li>• Can adapt one's own communication style to better work with people of other cultures</li> </ul>
<b>25. Understanding the global context of engineering practice</b>	<ul style="list-style-type: none"> <li>• Understands how engineers from different countries/cultures frame problems and pursue solutions</li> <li>• Works effectively in teams of engineers from different countries and/or cultures</li> </ul>
<b>26. Working with other professions</b>	<ul style="list-style-type: none"> <li>• Works effectively with people from non-technical backgrounds</li> <li>• Values the contributions of team members from nontechnical backgrounds</li> </ul>

### Sources

Ancona, D. A., Malone, T. W., Orlikowski, W. J., & Senge, P. M. (2007). In praise of the incomplete leader. *Harvard Business Review*, February 2007, 92–100.

Bernard M. Gordon-MIT Engineering Leadership Program (2011). *Capabilities of Effective Engineering Leaders*, Version 3.6.

Burke, C. S., Stagl, K. C., Klein, C., Goodwin, G. F., Salas, E., & Halpin, S. M. (2006). What type of leadership behaviors are functional in teams? A meta-analysis. *The Leadership Quarterly*, 17, 288-307.

Fleishman, E. A., Mumford, M. D., Zaccaro, S. J., Levin, K. Y., Korotkin, A. L., & Hein, M. B. (1991). Taxonomic efforts in the description of leader behavior: A synthesis and functional interpretation. *The Leadership Quarterly*, 4, 245–287.

Institute for Leadership Education in Engineering (2014). *Handbook for Student Leaders*. Toronto, Ontario: University of Toronto.

Komives, S. R., Owen, J. E., Longerbeam, S. D., Mainella, F. C., & Osteen, L. (2005). Developing a leadership identity: A grounded theory. *Journal of College Student Development*, 46, 593–611.

Komives, S. R., Longerbeam, S. D., Owen, J. E., Mainella, F. C., & Osteen, L. (2006). A leadership identity development model: Applications from a grounded theory. *Journal of College Student Development*, 47, 401–418.

Komives, S. R., Longerbeam, S. D., Mainella, F. C., Osteen, L., Owen, J. E., & Wagner, W. (2013). Leadership identity development: Challenges in applying a developmental model. *Journal of Leadership Education*, 8, 1, 11–47.

Rice Center for Engineering Leadership (2014). *RCEL Engineering Leadership Certificate Handbook*. Houston: Rice University.

Salas, E., Sims, D. E., & Burke, C. S. (2005). Is there “big five” in teamwork? *Small Group Research*, 36, 555–599.

Wolfenbarger, K. G. & Shehab, R. L. (2015). What behaviors and characteristics do engineering students associate with leadership? In *Proceedings of the American Society for Engineering Education 2015 Annual Meeting*.