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

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<th>Capability</th>
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| **1. Developing self-awareness** — an ability to understand oneself and one’s aspirations and possibilities | • Develops an accurate and practical understanding of “who I am” and “who I can become”  
• Knows personal strengths, constraints, and development opportunities  
• Practices self-control  
• Develops self-confidence  
• Routinely seeks out and receives feedback from others  
• Knows one’s basic needs, motivations, and values  
• Possesses intellectual humility  
• Strengthens one’s ethical values and principles |
| **2. Setting and achieving goals** — knowing how to set personal goals, allocate resources accordingly, monitor progress, and achieve results. | • Has a personal and professional vision  
• Sets SMART goals  
• Takes initiative  
• Plans, monitors, and manages goal achievement  
• Develops drive, perseverance, and resourcefulness  
• Achieves measurable results and learns from the process |
| **3. Problem-solving and decision-making** — the ability to make effective decisions using rational and creative methods | • Understands common decision-making heuristics and biases  
• Defines problems, generates alternatives, evaluates alternatives, implements solutions  
• Is comfortable with ambiguity; does not rush to reach a decision  
• Makes decisions with confidence  
• Practices practical ingenuity  
• Practices open-mindedness  
• Learns from problem-solving experiences  
• Builds capacity for creativity and innovation |
| **4. Building technical and financial expertise** | • Developing technical skills that distinguish one from one’s peers  
• Developing a working knowledge of business finance |

* For the sake of readability, excerpts from the RCEL Handbook are not indicated by quotations.
## The Interpersonal Domain

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| **5. Practicing good followership** – Being a positive, productive, and sometimes outstanding individual contributor | • Assesses current commitments and allocates time and effort to make a positive and productive impact  
• Knows how to discover what is expected for strong results  
• Delivers outstanding results  
• Knows when to step back and allow another person to take the lead  
• Actively contributes to the group decision-making process  
• Supports the group leader  
• Challenges the status quo, especially when it is the “right thing to do” |
| **6. Building positive relationships** – The ability to initiate, create, and maintain mutually satisfying and beneficial relationships and social ties | • Develops perceptivity regarding others’ emotions and social styles  
• Builds mutually satisfying and beneficial relationships  
• Acts with compassion  
• Builds trust and credibility  
• Assesses current networks for personal and professional purposes  
• Builds and manages networks  
• Speaks and acts with civility; promotes an environment of civility |
| **7. Practicing inclusivity**                  | • Speaks and acts in ways that affirm the value of all people  
• Promotes fairness  
• Encourages input from all group members  
• Understands and recognizes implicit bias  
• Deploys strategies to counteract the effects of bias  
• Acts as an ally for people who may feel excluded |
| **8. Collaboration**                           | • Works effectively within a group to accomplish the group’s goals  
• Facilitates good teamwork processes  
• Deploys strategies for capturing, discussing, and evaluating ideas  
• Uses established techniques to manage group discussions  
• Makes sure all members of a group feel free to contribute |
| **9. Managing conflict and negotiation** – The ability to experience and manage differences in constructive ways | • Diagnoses sources of conflict  
• Manages emotions surrounding conflict  
• Values and learns from diversity  
• Understands one’s preferred conflict management style  
• Matches appropriate conflict management styles to conflict situation |
| **10. Communicating effectively**              | • Chooses appropriate communication strategies  
• Crafts the message to fit the audience  
• Designs effective visual aids  
• Is confident and articulate when speaking in public  
• Uses effective written communication practices |
# The Management and Teamwork Domain

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| 11. Organizing – Designing and developing a structure to achieve desired results | - Identifies needs and requirements*  
- Creates an overall structure of shared responsibilities and interrelationships  
- Creates individual role requirements, responsibilities, and expectations  
- Establishes processes for transition and succession |
| 12. Working in a team | - Effectively composes and launches project teams  
- Coordinates the efforts of team members  
- Stays aware of the actions of other team members  
- Engages in backup behavior as needed  
- Documents team practices and processes; stores and disseminates information appropriately  
- Encourages shared leadership practices within a team  
- Promotes team-level learning  
- Acts in ways that promote and improve the team’s overall capacity for leadership |
| 13. Staffing – Assessing and selecting individuals for specific roles | - Identifies the skills needed to meet the team’s objectives  
- Assesses the skills and interests currently possessed by team members  
- Recruits and selects people for roles, based on team needs and individuals’ interests and strengths |
| 14. Managing projects | - Understands principles and tools of project management  
- Creates plans to achieve goals and objectives in accordance with the organization’s vision  
- Implements and updating plans to achieve desired results  
- Coordinates group members’ efforts  
- Understands budgeting; can manage financial resources  
- Can deliver a project on time, on budget, and to specification. |
| 15. Training & mentoring | - Shares knowledge and expertise with others  
- Coaches others  
- Mentors younger or less-experienced students |
| 16. Empowering and delegating – Enabling others to have the authority, control, and voice in achieving shared objectives and making group decisions | - Diagnoses situations where empowerment or delegation is appropriate  
- Deploys strategies for enabling others to become empowered and confident in their roles  
- Uses delegation strategies appropriately in decision-making situations  
- Employs good follow-up practices  
- Practices effective group decision-making |

*Fleishman et al., 1991*
### The Leadership Domain

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| **17. Creating a shared vision** – Creating and implementing a shared vision, goals, & objectives for achieving these aspirations | • Defines purpose, goals, and strategies  
• Creates awareness of strategic context or environment (sense-making)  
• Creates a shared vision and mission  
• Translates mission into goals, objectives, and measures of success |
| **18. Motivating and inspiring others** – Creating an environment that enhances the ability, motivation, and opportunities among members to achieve outstanding results | • Communicates a clear and meaningful vision  
• Understands intrinsic and extrinsic motivation  
• Builds a work environment that fosters intrinsic motivation  
• Uses rewards and recognition appropriately to enhance motivation  
• Uses rhetorical strategies to enhance the effectiveness of communications  
• Diagnoses performance problems  
• Deploys appropriate strategies for resolving performance problems |
| **19. Adapting leadership styles** – Using a repertoire of different leadership styles to meet the specific situational requirements | • Understands and relates to people as individuals  
• Understands one’s natural or preferred leadership style  
• Selects behavioral strategies to meet specific situational needs (i.e., balancing a focus on relationships versus delivering results) |
| **20. Building power and influence** – Understanding the existence and necessity of power and building power for ethical and shared purposes. The ability to gain others’ attention, commitment, and cooperation. | • Understands the relationship between power and influence  
• Diagnoses sources of personal, positional, and nonpositional power and influence  
• Diagnoses situations to select appropriate influence strategy  
• Knows how to influence upwards  
• Builds and manages personal sources of influence  
• Manages positional sources of power  
• Knows how to convert power into influence |
| **21. Boundary Spanning** – “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”* | • Works with stakeholders, suppliers, sponsors, and other organizations to increase the group’s personnel, material, and/or financial resources  
• Understands the political environment of the larger organization  
• Builds connections between one’s group and other groups |
| **22. Leading change** – Creating and implementing positive and lasting change | • Identifies a need for change  
• Imagines new possibilities  
• Works with others to effect change  
• Becomes comfortable with the chaos associated with change  
• Creates and implements a process for sustaining improvements |

*Burke et al., 2006
# The Intercultural Domain

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| 23. Understanding cultural dimensions of leadership | • Recognizes the influence of culture on the understanding of leadership  
• Can identify leadership attributes that are common across cultures  
• Can identify leadership attributes that are culturally conditioned |
| 24. Intercultural communication           | • Understands the communication patterns characteristic of high-context and low-context cultures  
• Can adapt one’s own communication style to better work with people of other cultures |
| 25. Understanding the global context of engineering practice | • Understands how engineers from different countries/cultures frame problems and pursue solutions  
• Works effectively in teams of engineers from different countries and/or cultures |
| 26. Working with other professions       | • Works effectively with people from non-technical backgrounds  
• Values the contributions of team members from nontechnical backgrounds |

## Sources


