Faculty of Applied Science & Engineering  
Graduate Studies – ELITE Program – University of Toronto

**APS1030**  
**Engineering Careers – Theories and Strategies to Manage your Career for the Future**

**Course description**

21st century career management skills and knowledge are critical success factors for engineers, to develop their own careers for the future, and as leaders and project managers, to help develop others’ careers. Especially in engineering where career engagement influences innovation and productivity, talent management is arguably the most important learning to bridge the gap between an engineering education and an engineer’s ability to apply their learning in the real world.

In this course, students will learn about contemporary theories and issues in career development and talent management so they can apply their knowledge and skills, to benefit their own career wellbeing, their teams, organizations, and society. Students will learn an evidence-based framework for career clarification and exploration. Using this framework, students gain talent management strategies, increase hope and confidence, expand their network and use practical tools. In an increasingly volatile, uncertain, complex, ambiguous (VUCA) world of work, students will consider career paths, hear and tell career stories, and understand talent management in the broader scope of careers in organizations and self-employment, and related issues of mobility, professionalization, dual careers, and more.

**Learning Outcomes**

By the end of the course students will be able to:

- Describe a narrative framework for career management and tools for career clarification and exploration
- Categorize one’s own career stories into a holistic ‘career statement’
- Use your ‘career statement’ to guide your own career exploration, utilizing an Exploration Plan
- Create meaningful links between knowledge gained in class, and practical career tools including resume, LinkedIn profile and job interview
- Evaluate approaches to career and performance management in organization
- Critique notions of career engagement, employee engagement and a manager’s role
- As they relate to careers, list key elements of chaos theory, planned happenstance, limits of rationality, harmonious and obsessive passion
- Describe aspects of the professionalization of engineering
- Explain an innovation mindset in one’s career and paraphrase the links between innovation, productivity and career
- Apply Luthan’s psychological capital to career and workplace talent management
- Analyze three narrative methods for career clarification and life design
Personal attribute outcome: Students will experience increases in hope, confidence, optimism, resilience, collectively, psychological capital (PsyCap)

Impact outcomes: Over the next few years students will make satisfying choices aligned with the Career Statement and Exploration Plan they developed in this course; When they become managers, students will use skills and knowledge gained to help develop the careers of their subordinates and peers.

Course delivery overview
It is anticipated that the delivery of this course will be based on four themes delivered in 12 sessions, plus an intro session. Each theme will include one or more CAReer MAnagement (CARMA) Tools.

This course is different from other engineering content courses in that the personal stakes are high with respect to the impact on one’s own career and life. The implications of your work will reach in a real way beyond this course, your job search and early years on the job. Each class builds on the previous one. In part because of the high personal stakes, you may find yourself tempted to devote a lot of time to the materials. You will have to manage your time investments wisely. The individual and organizational views of the course will ask you to shift perspectives frequently. Personal issues may arise and class members will be asked to treat personal issues and data with respect and understanding.

Note: Articles listed below are a mix of required and optional reading, provided here to give prospective students a sense of the material. Final required reading list will be available in first class meeting.

Theme 1 – Navigating Careers in a VUCA world (Volatile, Uncertain, Complex, Ambiguous)

- Complexity, chaos, and nonlinear dynamics; Applying chaos theory of careers to your career

- Learning to plan and pivot in your career like a startup

- Innovation and Careers [collaboratively presented with Stephen Armstrong]
  - What it means to be innovative; integrating an innovation mindset in your career
Maintaining an engineering career in evolving and innovative workplaces; learning to recognize the 'sweet spot' between burnout and obsolescence

- CARMA Tools #1: Skill & network building plus practical tools
  - Who You Are MATTERS! career and life clarification game experience

**Theme 2 – Career & Life Clarification, for Oneself**

- Hope + Confidence + Optimism + Resilience = Psychological capital; Your PsyCap and why growing it helps you manage careers, yours and others

- Harmonious and obsessive passion

- Narrative methods for career clarification, My Career Story, the Storied Approach, and Life Design
CARMA TOOLS #2: Skill & network building plus practical tools
  o Bring your Career Statement to life; peer groups established for students to read and hear each others’ Career Statements

CARMA TOOLS #3: Skill & network building plus practical tools

Theme 3 – Intentional Exploration and Making Choices

  o Planned Happenstance; what it is; how it influences careers, yours and others

  o Rational limits of career decision making

  o Underemployment, Unemployment, Poorly Integrated New Entrants (PINES)
    Bell, D., Benes, K. (2012). Transitioning Graduates to Work: Improving the Labour Market Success of Poorly Integrated New Entrants (PINEs) in Canada. CCDF FCDC.

  o Professionalization of Engineering; establishing and managing careers
    PEO’s role, and how to articulate your engineering experience
    The roles of OSPE, OACETT, Engineers Canada, CEO
    The roles of your manager, HR, external career professionals (e.g. Association of Career Professionals International), friends & family

CARMA TOOLS #4: Skill & network building plus practical tools
  o Constructing your Possibility & Exploration Plan (PEP). Each student’s PEP will have at least three next step possibilities. Each possibility will be coupled with relevant ‘clues’ including ‘Job Market Trends and News’ from http://www.jobbank.gc.ca/. Aligned with each possibility, students will identify inspired actions, and possible requirements

CARMA TOOLS #5: Skill & network building plus practical tools
  o Career Tools Alignment: Job Postings, Resume, LinkedIn profile. Students will find at least three relevant postings, analyze them for fit, then adapt their resume and LinkedIn profile for these possibilities. Students will use http://www.jobbank.gc.ca/ https://www.linkedin.com/ http://www.eluta.ca/
CARMA TOOLS #6: Skill & network building plus practical tools
  - Interview skills workshop. Students will learn and experience job interview scenarios for engineering jobs. Skills will be built around behavioural interview questions using the STAR technique, situational and open ended interview questions.

Theme 4 – Managing Engineering Talent

- Managing careers in large organizations

- Career engagement as a key component of employee engagement

- What you need to know about performance management: pros and cons of traditional performance reviews; introducing the evidence-based ‘feedforward’ method
  - Performance reviews overview

- Unexpected unemployment; Job loss as a blessing in disguise
  - Overview of what happens to employees when companies reorganize
  - The career transition reality; career transition industry
Recruiters, Executive Search, Headhunters: who they are and how they work

Job-search strategies and reemployment quality

Narratives at work: the development of career identity

Internationally educated professionals: their career experiences in Canada
View film: Dr. Cabbie (2014) D: Jean-François Pouliot

CARMA TOOLS #6: Skill & network building plus practical tools
Experience and learn to use the Feedforward model

CARMA TOOLS #7: Skill & network building plus practical tools
Managing careers in organizations: Students plan, moderate and debrief Panel of Experts

Evaluation

Critical reviews of articles 25% (Three reviews, 700-1000 words each)
Personal career management assignment 25%
Class engagement & participation 25%
Project with In-class presentation 25%

Instructor Bio
Mark Franklin,M.Ed.,P.Eng.,CMF, is practice leader of CareerCycles, a career management social enterprise based in Toronto, and president of One Life Tools. Mark and a team of Associates have enriched the career wellbeing of 3500+ clients of all ages and stages across Canada by helping individuals make satisfying career and educational choices. Mark holds a Bachelor of Applied Science in Industrial Engineering, a Master of Education in Counselling Psychology, and the Career Management Fellow designation through Institute of Career Certification International. In his engineering career, Mark consulted with hundreds of client companies first with a decision support provider then as a management consultant with KPMG. Later,
Mark worked as a career counsellor at U of Toronto and York U where helped thousands of students connect the dots between education and career. Mark’s career management insights have appeared in The Globe and Mail, National Post and other media, he’s authored a book chapter and peer-reviewed journal articles, and he regularly speaks to groups at national and international conferences. Mark produces and hosts the Career Buzz radio show (Wed. 11am-noon on 89.5 FM or ciut.fm) where he’s interviewed hundreds of guests about insights and turning points in their career stories.

**Instructor Philosophy**

- Enthusiasm for learning is contagious...model it to find it
- We choose how we think, feel and act
- Information is not knowledge...knowledge is constructed, not given
- High expectations help generate excellent outcomes
- Communication is essential, and goes both ways
- Attendance, participation, and preparation are crucial aspects of the class. Readings and assignments are in addition to, and supportive of, classroom lectures, discussions and activities.