



National Survey of Student Engagement

Fall 2015

Selected Items Related to Societal Impact and Application

Dates of Administration: February 17, 2015 – March 17, 2015
Method of Administration: Web survey (Administered through NSSE)

Demographics and Response Rates:

	First Years	Seniors
Overall Response Rate	47% (90/193)	58% (107/186)
% Female	54%	50%
% Am. Indian or AK Native	2%	1%
% Asian	18%	20%
% Black or African American	0%	1%
% Hispanic or Latino	0%	1%
% White	49%	63%
% International/foreign born	8%	8%
% Two or more races	11%	1%
% Unknown	10%	6%

Background:

The National Survey of Student Engagement (NSSE) asks first year and senior students about the characteristics and quality of their undergraduate experience. It includes 10 Engagement Indicators (Higher-Order Learning, Reflective and Integrative Learning, Learning Strategies, Quantitative Reasoning, Collaborative Learning, Discussions with Diverse Others, Student-Faculty Interaction, Effective Teaching Practices, Quality of Interactions, and Supportive Environment) and High Impact Practices (Learning Communities, Service-Learning, Research with Faculty, Internships, Student Abroad, and Capstones). Additionally, NSSE allows campuses to add up to two additional topical modules to their survey. In 2015, HMC added module on Experiences with Writing. Every three years, we participate in the Association of Independent Technical Universities (AITU) consortium, appending their 20 questions to our survey and using these schools as one of our two comparison groups. Our other comparison group is our Carnegie Class (Private Selective Baccalaureate Arts & Sciences Focus).

HMC participates in the NSSE survey annually each spring, and surveys all first years and graduating seniors. NSSE results are used throughout the campus in departmental program reviews to evaluate growth and development on student learning outcomes and by the college overall in its improvement efforts.

Highlights:

The main NSSE survey contains several items that relate to applying knowledge to real world settings and placing knowledge in broader societal contexts. Because we only have AITU consortium results every three years and those items are directly relevant to the core learning outcome of societal impact and application, this report focuses on the AITU items. Our consistent participation in the consortium means we have the ability to examine trends over time, as well as differences between first years and seniors.

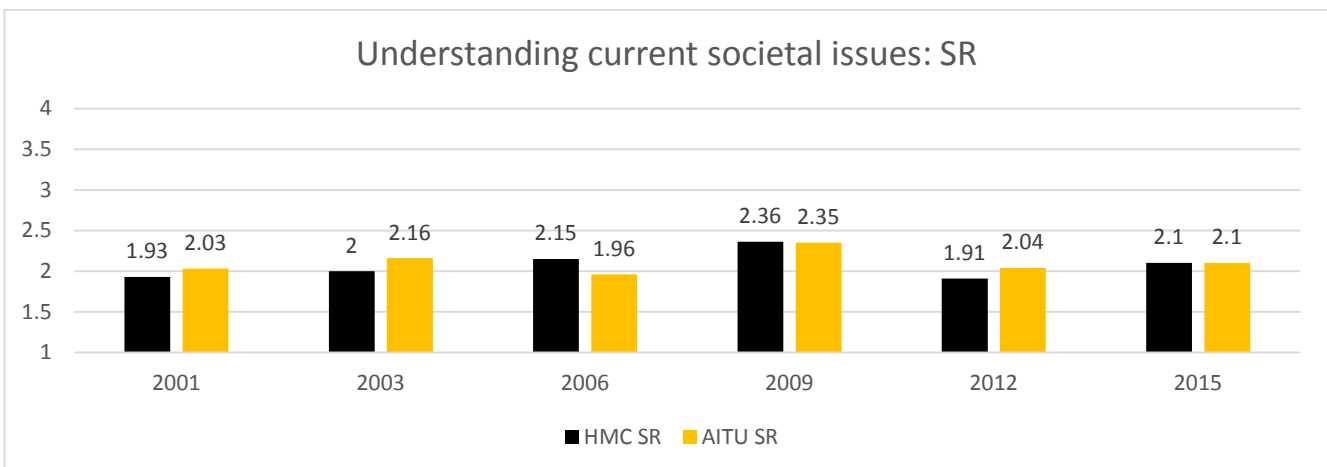
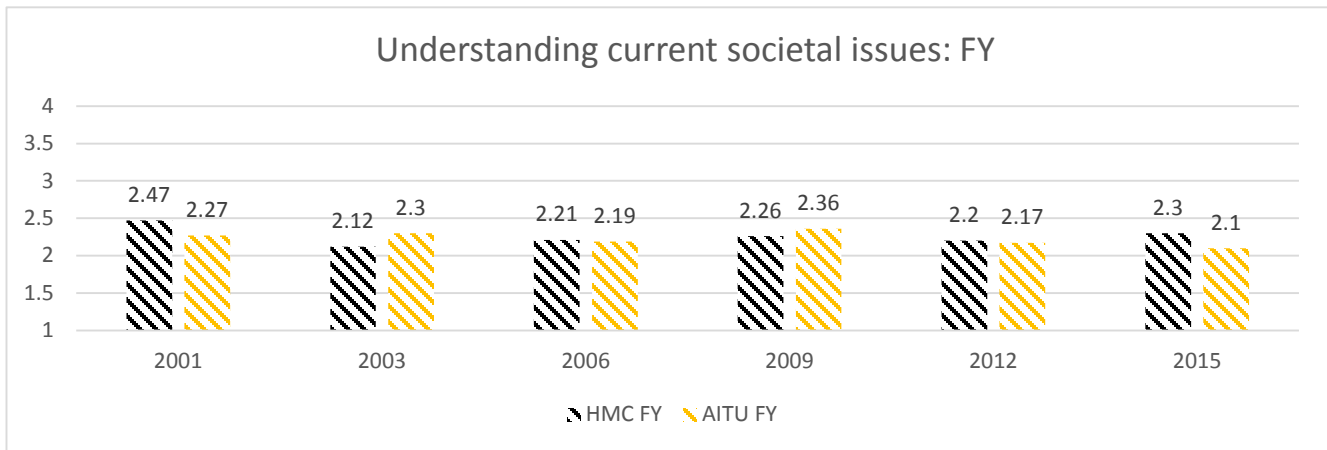
- For both first years and seniors, applying technical skills (using mathematics and using scientific methods) are higher than respondents at AITU schools.
- Applying engineering methods is lower for both our first years and our seniors, but to put this difference in context, our first years have not had an engineering methods course by the time they take NSSE in the spring of their first year, and unlike our AITU peers, our seniors are not all engineers.

- With respect to first years over time, HMC and the other AITU schools show similar patterns in their responses with respect to understanding current social issues, understanding how their future professional work might impact society, understanding ethics, being able to make decisions consistent with the health and safety of the public, and recognizing conflicts of interest that they might face in their profession.
- The same cannot be said for seniors. HMC was keeping pace, or even outpacing AITU schools on these items until 2015, when we see a drop on all but one item (understanding current societal issues).

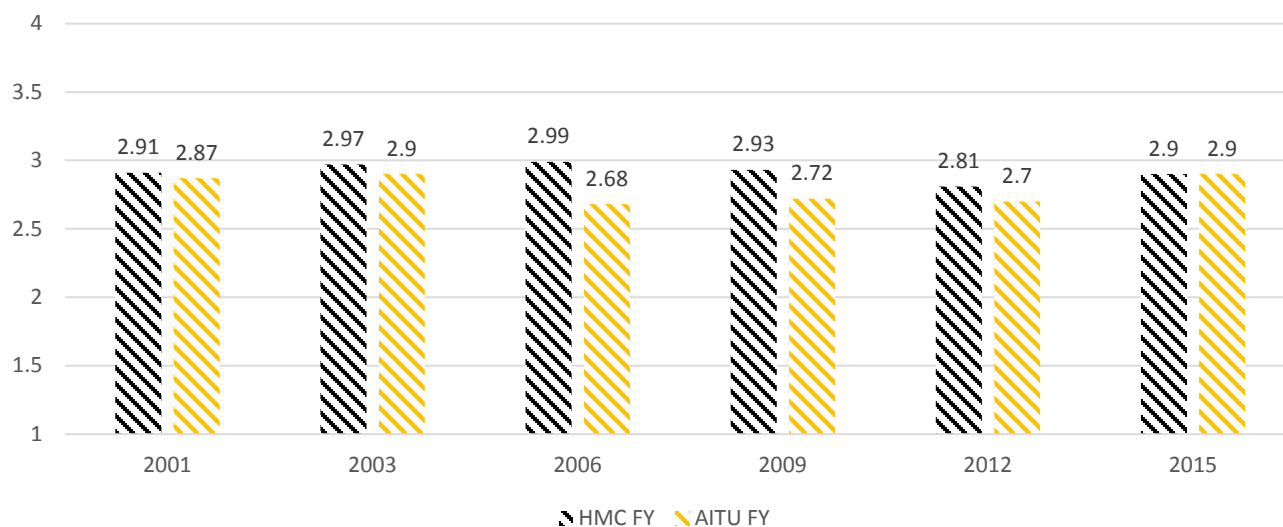
Trends for AITU Items in Comparison to AITU Peers

Response Scale: 1 - Very Little; 2 = Some; 3 = Quite a Bit; 4 = Very Much

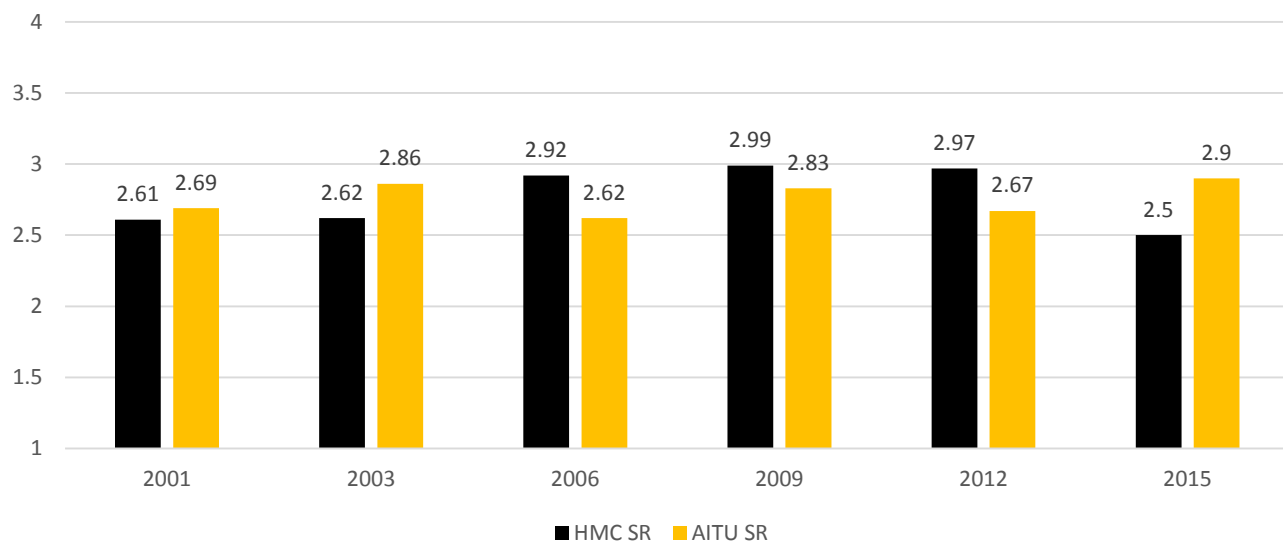
ITEM		2001	2003	2006	2009	2012	2015
First Years							
Understanding current societal issues	HMC FY	2.47	2.12	2.21	2.26	2.20	2.3
	AITU FY	2.27	2.30	2.19	2.36	2.17	2.1
Understanding how your future professional work might impact society	HMC FY	2.91	2.97	2.99	2.93	2.81	2.9
	AITU FY	2.87	2.90	2.68	2.72	2.70	2.9
Seniors							
Understanding current societal issues	HMC SR	1.93	2.00	2.15	2.36	1.91	2.1
	AITU SR	2.03	2.16	1.96	2.35	2.04	2.1
Understanding how your future professional work might impact society	HMC SR	2.61	2.62	2.92	2.99	2.97	2.5
	AITU SR	2.69	2.86	2.62	2.83	2.67	2.9



Understanding how my future professional work might impact society: FY

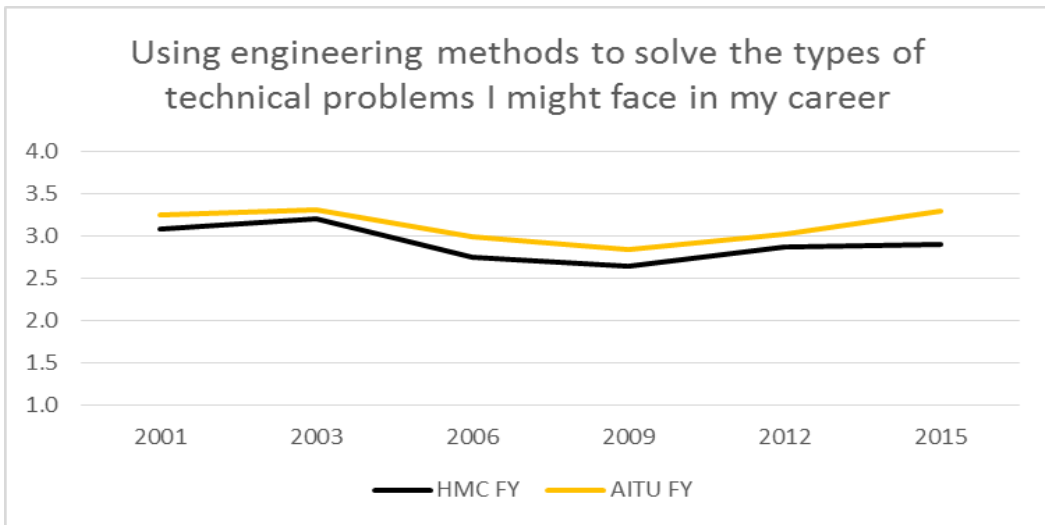
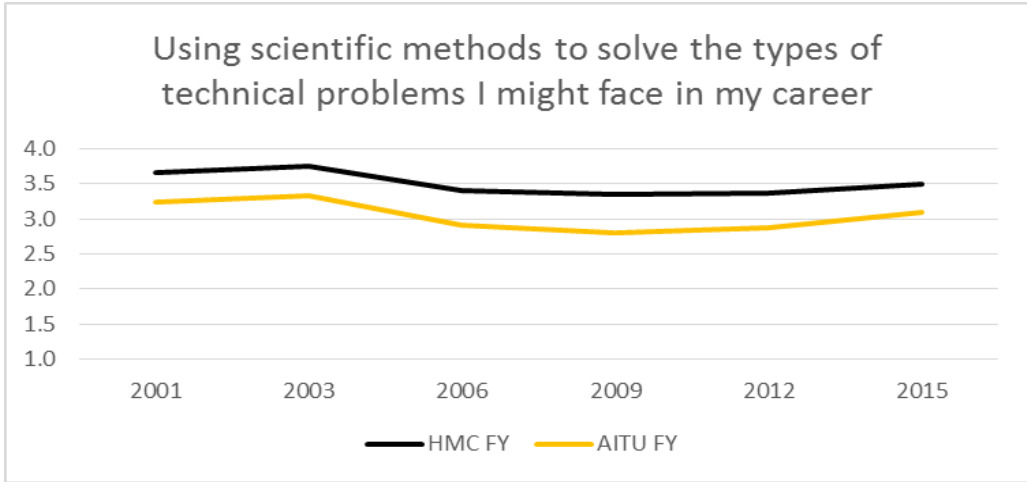
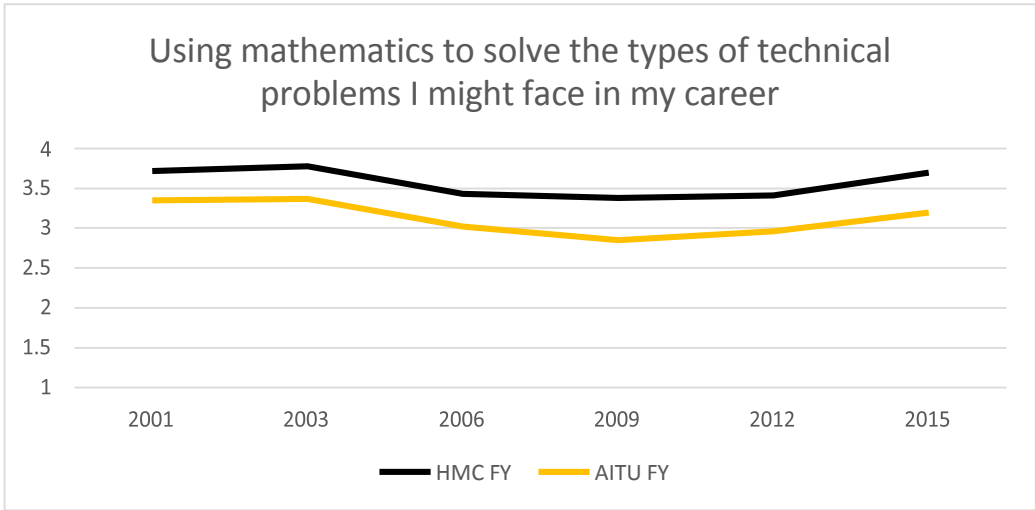


Understanding how my future professional work might impact society: SR

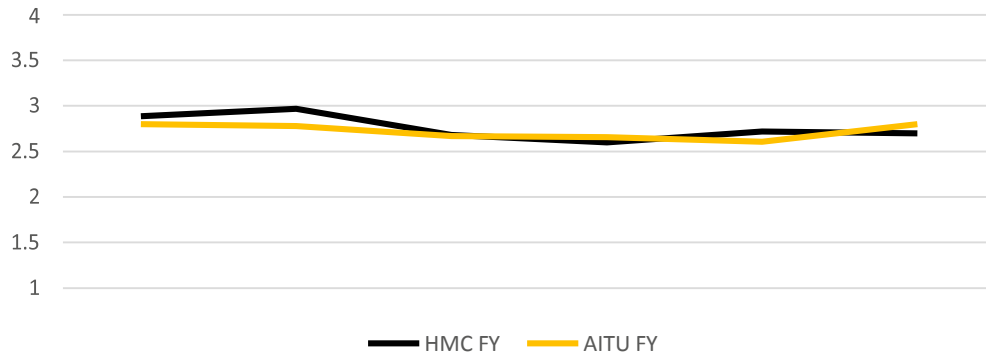


FIRST YEAR TRENDS

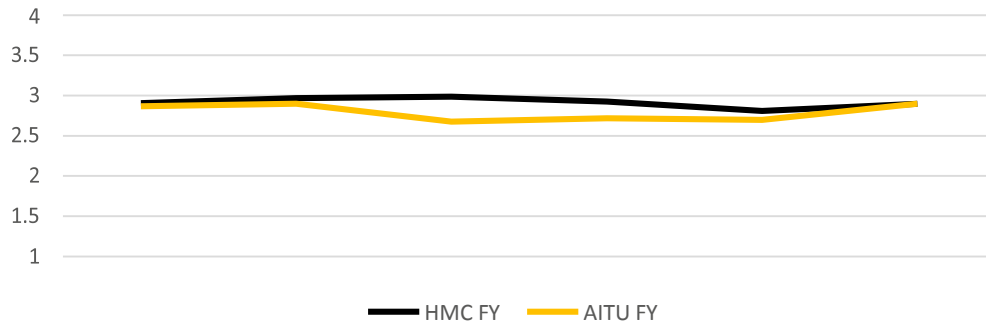
ITEM		2001	2003	2006	2009	2012	2015
Using mathematics to solve the types of technical problems I might face in my career	HMC FY	3.72	3.78	3.43	3.38	3.41	3.7
	AITU FY	3.35	3.37	3.02	2.85	2.96	3.2
Using scientific methods to solve the types of technical problems I might face in my career	HMC FY	3.66	3.74	3.41	3.34	3.36	3.5
	AITU FY	3.23	3.32	2.91	2.80	2.88	3.1
Using engineering methods to solve the types of technical problems I might face in my career	HMC FY	3.08	3.21	2.76	2.65	2.87	2.9
	AITU FY	3.25	3.32	3.00	2.85	3.02	3.3
		2001	2003	2006	2009	2012	2015
Understanding the code of ethics for my chosen profession	HMC FY	2.89	2.97	2.68	2.60	2.72	2.7
	AITU FY	2.80	2.78	2.67	2.66	2.61	2.8
Understanding how my future professional work might impact society	HMC FY	2.91	2.97	2.99	2.93	2.81	2.9
	AITU FY	2.87	2.90	2.68	2.72	2.70	2.9
Understanding current societal issues (e.g. political, cultural, economic)	HMC FY	2.47	2.12	2.21	2.26	2.20	2.3
	AITU FY	2.27	2.30	2.19	2.36	2.17	2.1
Being able to make decisions consistent with the health, safety and welfare of the public	HMC FY	2.56	2.83	2.70	2.73	2.58	2.7
	AITU FY	2.60	2.67	2.52	2.61	2.57	2.7
Being able to recognize conflicts of interest that I might face in my profession	HMC FY	2.67	2.57	2.45	2.43	2.51	2.4
	AITU FY	2.60	2.66	2.53	2.57	2.51	2.6
Knowing how to identify and when to disclose factors that might endanger the public or the environment	HMC FY	2.35	2.51	2.40	2.29	2.17	2.3
	AITU FY	2.43	2.45	2.36	2.37	2.35	2.4
Integrating the concept of sustaining the environment into decision-making	HMC FY	2.36	3.03	2.58	2.48	2.33	2.5
	AITU FY	2.34	2.37	2.34	2.42	2.43	2.5



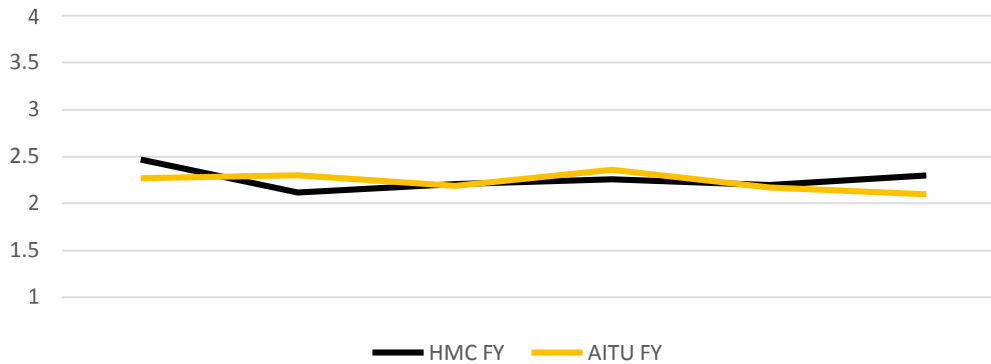
Understanding the code of ethics for my chosen profession



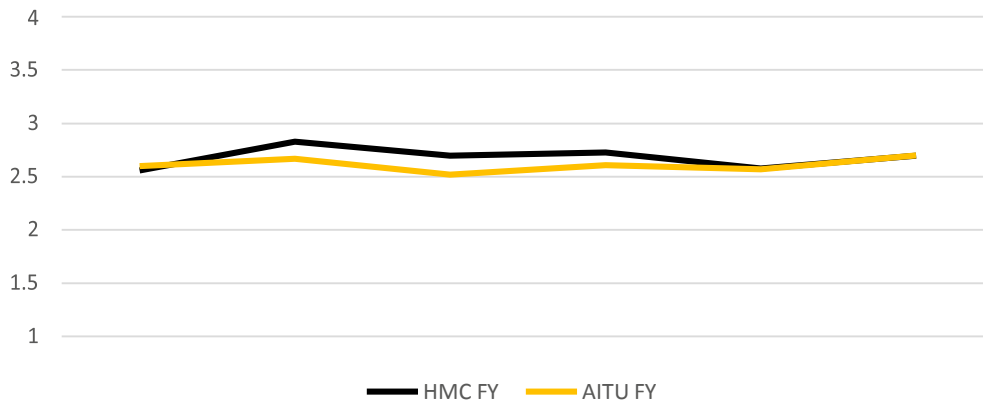
Understanding how my future professional work might impact society



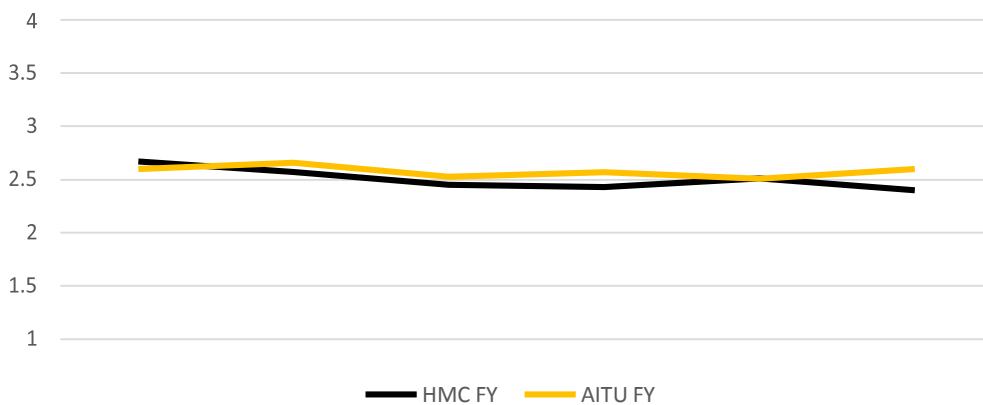
Understanding current societal Issues (e.g. political, cultural, economic)



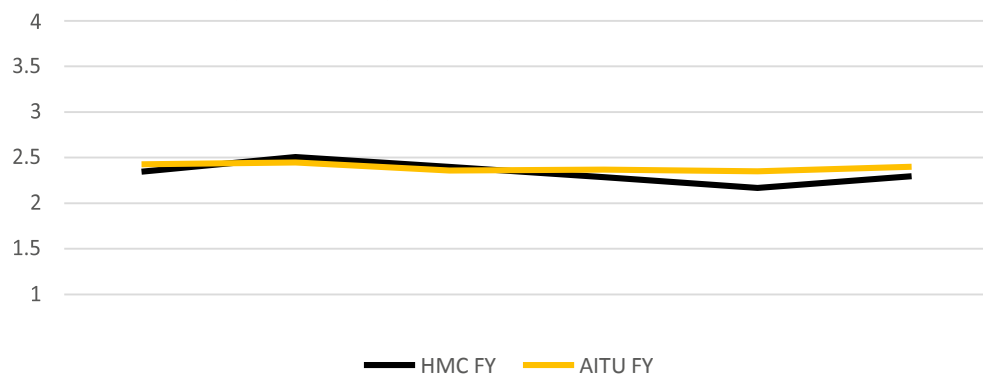
Being able to make decisions consistent with the health, safety and welfare of the public



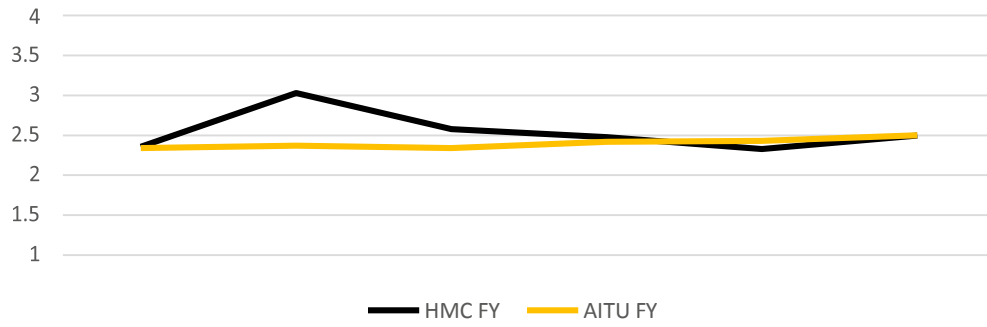
Being able to recognize conflicts of interest I might face in my profession



Knowing how to identify and when to disclose factors that might endanger the public or the environment



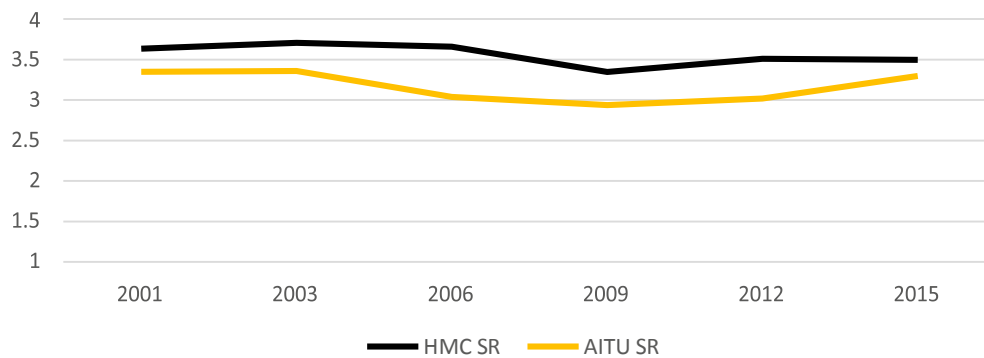
Integrating the concept of sustaining the environment into decision-making



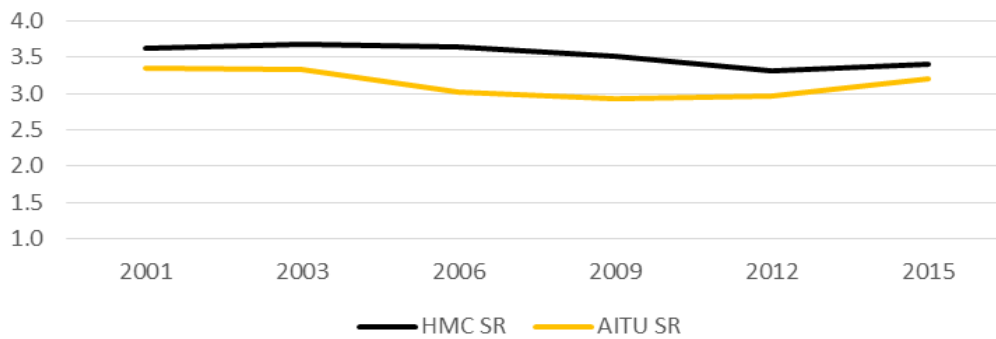
SENIOR TRENDS

ITEM		2001	2003	2006	2009	2012	2015
Using mathematics to solve the types of technical problems I might face in my career	HMC SR	3.64	3.71	3.66	3.35	3.51	3.5
	AITU SR	3.35	3.36	3.04	2.94	3.02	3.3
Using scientific methods to solve the types of technical problems I might face in my career	HMC SR	3.62	3.68	3.64	3.51	3.31	3.4
	AITU SR	3.35	3.33	3.01	2.92	2.96	3.2
Using engineering methods to solve the types of technical problems I might face in my career	HMC SR	3.03	3.16	2.99	2.96	2.96	3.1
	AITU SR	3.44	3.45	3.18	3.02	3.19	3.4
		2001	2003	2006	2009	2012	2015
Understanding the code of ethics for my chosen profession	HMC SR	2.66	2.67	2.74	2.76	2.75	2.4
	AITU SR	2.66	2.87	2.61	2.79	2.63	2.8
Understanding how my future professional work might impact society	HMC SR	2.61	2.62	2.92	2.99	2.97	2.5
	AITU SR	2.69	2.86	2.62	2.83	2.67	2.9
Understanding current societal issues (e.g. political, cultural, economic)	HMC SR	1.93	2.00	2.15	2.36	1.91	2.1
	AITU SR	2.03	2.60	1.96	2.35	2.04	2.1
Being able to make decisions consistent with the health, safety and welfare of the public	HMC SR	2.36	2.25	2.66	2.76	2.61	2.2
	AITU SR	2.49	2.65	2.50	2.74	2.59	2.8
Being able to recognize conflicts of interest that I might face in my profession	HMC SR	2.40	2.38	2.58	2.66	2.51	2.0
	AITU SR	2.58	2.62	2.47	2.68	2.51	2.7
Knowing how to identify and when to disclose factors that might endanger the public or the environment	HMC SR	2.28	2.27	2.31	2.24	2.10	1.9
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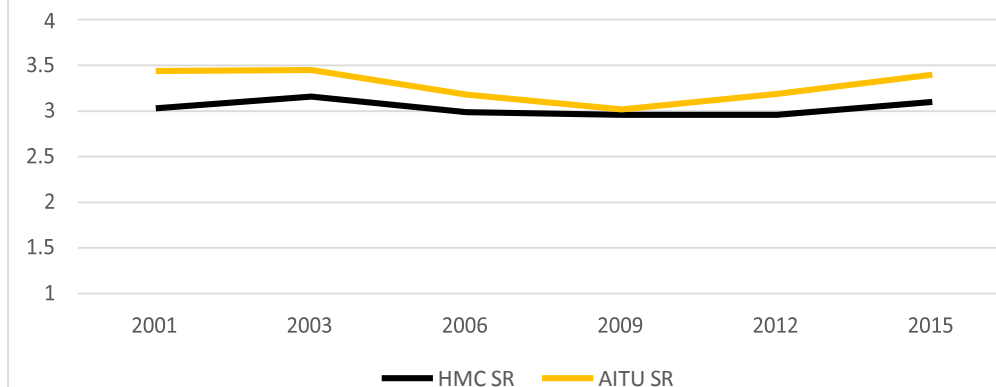
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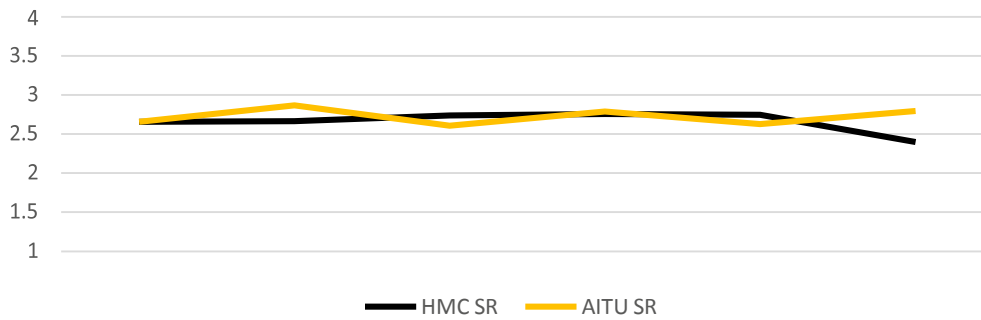
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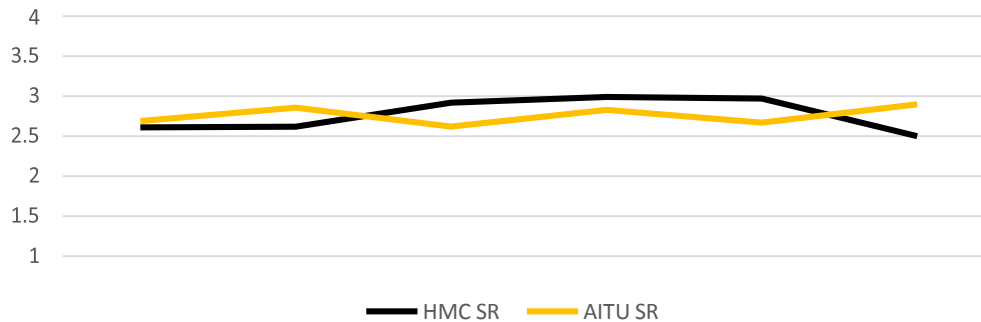
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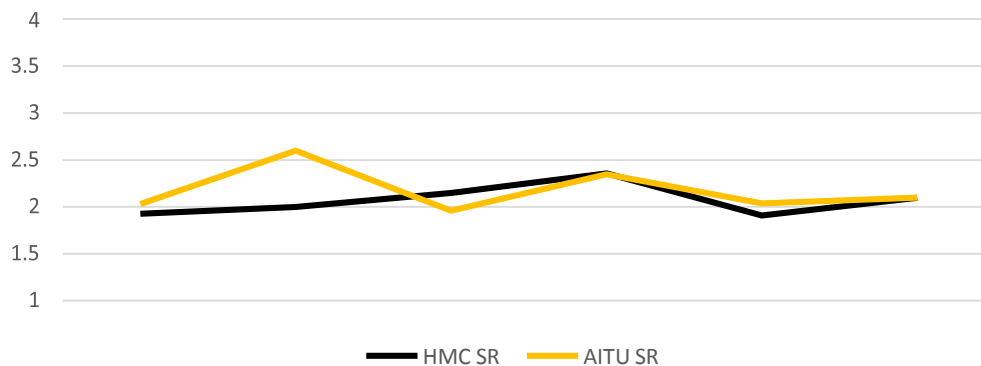
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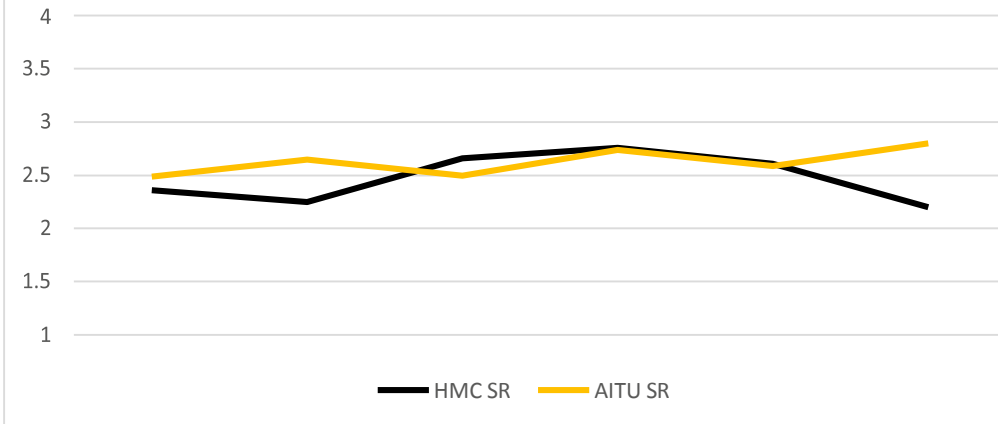
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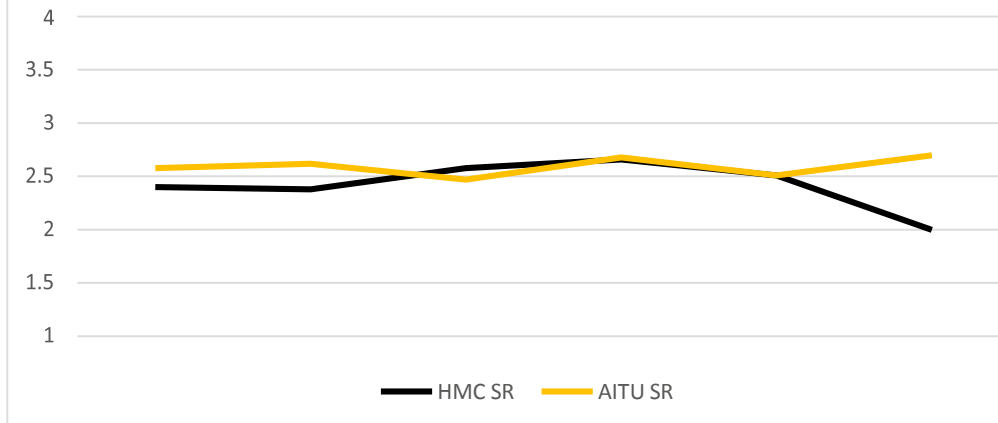
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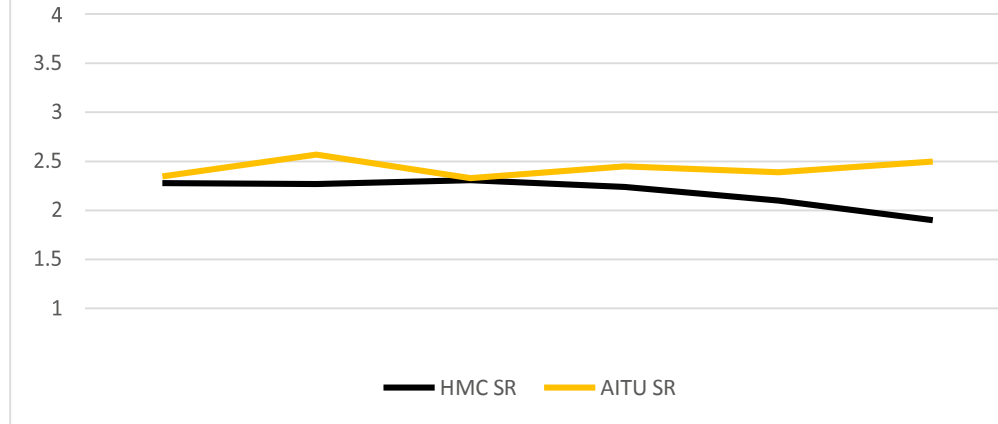
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