**J.J. Strossmayer University in Osijek, Croatia**

**The doctoral program in Entrepreneurship and Innovativeness**

***Methodology of Entrepreneurial Research Course***

***2nd semester, obligatory course, 2022***

**Instructors:**

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**Course aims**

1. To make students capable of understanding the conceptual framework of the scientific research in entrepreneurship, with a focus on the GEM conceptual framework, major findings, and lines of inquiry
2. To enable students to design and conduct their research in entrepreneurship, by using the GEM database, and following the IMRaD methodology. That aim will be accomplished by:
   * introducing students to the IMRaD approach to writing a research paper (teaching them how to structure their research paper)
   * teaching students how to write Introduction, Methods, Results, Discussion, and Conclusion sections, and how to describe literature review sections where needed
   * enabling students to analyze data using a basic or advanced statistical methodology (Statistica software), discuss their results, and draw a conclusion

**Course contents**

1. Introduction to entrepreneurship research fields of study
2. GEM – **Global entrepreneurship Monitor - Conceptual framework** of the entrepreneurship research (GEM); main indicators, major findings
3. **GEM resources**: purpose and contents of the databases, accessibility of the resources, data interface
4. **IMRaD Approach to publishing scientific papers:** Guided discussion - Tracking IMRaD in a selected scientific article
5. **Methodology** – **Part 1-4**: Selected statistical procedures
   1. Inferential statistical tests employed with a single sample: z-test, t-test, chi-square test
   2. Inferential statistical tests employed with two independent samples: t-test, Mann-Whitney test, chi-square test
   3. Inferential statistical tests employed with two dependent samples: Wilcoxon Matched-Pairs Signed-Ranks Test
   4. Inferential statistical tests employed with two or more independent samples: ANOVA, Kruskal-Wallis ANOVA
6. **Data analysis of the GEM data sets using the Statistica tool**

**Course outcomes**

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

* Describe the conceptual framework of the GEM research, major findings, and lines of inquiry
* Use effectively the GEM database in their research, and analyze data using a basic or advanced methodology (Statistica software)
* Conduct appropriate statistical procedures to investigate relationships among data
* Do the literature review by reviewing IMRaD structure in previous papers in the field of entrepreneurship research

**Student assessment**

1. To take full advantage of the course, the doctoral candidates will have self-directed learning about the Global Entrepreneurship Monitor project to familiarize themselves with the conceptual framework of the data that will be used in statistical analysis sessions. Therefore, it would be excellent to try solving the self-assessment quiz by June 1st, 2022 at the latest. In addition, doctoral candidates should read the following article: Yves Robichaud; Rolland LeBrasseur; K.V. Nagarajan (2010) Necessity and Opportunity driven Entrepreneurs in Canada: An Investigation into their Characteristics and an Appraisal of the Role of Gender, Journal of Applied Business and Economics, 11(1), pp. 59-79, to be prepared to discuss the IMRaD structure of it on the online session scheduled for June, 2nd 2022. The above-mentioned activities involving self-directed preparation and learning should be performed any time between May 13th, 2022, and June 1st, 2022.
2. Doctoral candidate’s final evaluation will be based on the final assignment. The final assignment requires conducting statistical procedures to investigate relationships among data in GEM datasets and describing the results. This assignment should be sent to [natasa.sarlija@efos.hr](mailto:natasa.sarlija@efos.hr) until July 23rd, 2022.

**Literature:** Course handouts available at Loomen distance learning system

**Obligatory:**

1. Pfeifer, S. Šarlija, N. Zekić-Sušac, M., Methodology of entrepreneurial research – MoER, Handouts, 2018, <https://loomen.carnet.hr/course/view.php?id=44408#section-0>
2. Yves Robichaud; Rolland LeBrasseur; K.V. Nagarajan (2010) Necessity and Opportunity driven Entrepreneurs in Canada: An Investigation into their Characteristics and an Appraisal of the Role of Gender, Journal of Applied Business and Economics, 11(1), pp. 59-79.

**Optional:**

1. Levie, J.D. and Autio, Erkko (2008) *A theoretical grounding and test of the GEM model.* Small Business Economics, 31 (3). pp. 235-263. ISSN 0921-898X
2. Sheskin, D.J., Handbook of Parametric and Nonparametric Statistical Procedures, Chapman & Hall/CRC, Washingon D.C., 2004.
3. Swales, J.M., Feak, C.B., Academic Writing for Graduate Students, The University of Michigan Press, Ann Arbor 1999. (or newer issue)
4. Witten, I.H., Frank, E., Data Mining: Practical Machine Learning Tools and Techniques with Java Implementation, Morgan Kaufman Publishers, San Francisco, 2000.