**Federal State Budgetary Educational Institution of Higher Education "Moscow State Technological University" STANKIN "**

**(FGBEIHE«MSUT STANKIN»)**

**Professional Development ProgramAbstract**

**«Engineering of Digital Industrial Enterprises»**

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| Vicу Rector for Academics | Eleneva Yulia Iakovlevna |
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| website | <http://stankin.ru/> |
| Dates of the program | 25/05/20 – 05/06/20 |
| **Program description** | |
| Core audience | CEO|General directors of industrial enterprises, heads of divisions, senior specialists, leaders, heads of departments, workshop supervisors, master and postgraduate students |
| Professional activity | *Production, management, research* |
| Short program description | As part of the Program, students will obtain competencies of digital enterprises developing and managing, get acquainted with the technological equipment and technological solutions used in digital enterprises, role and perspectives of staff in the digital technologies environment.  **The goal of the Program**: the development of managerial, organizational and professional skills in the field of organization of digital production and the 4th Industrial revolution for machine-building enterprises.  **The objectives of the Program**:  1. Theoretical and practical acquisition of approaches to the design of digital production.  2. Obtaining knowledge and skills of selection and application of perspective technologies for digital production.  3. Obtaining of knowledge of the measurement system implementation in digital production.  4. Insight into examples of the implementation of digital production system elements.  The program is divided into 10 modules, each devoted to the certain aspects of the digital production design and organization.  **Program features**:   1. Practical orientation and focus on solving specific problems and obtaining maximum effect. 2. Case studies and examples are formulated on the basis of major and frequent challenges of the Russian and European digital production. |
| Program structure (including the number and titles of modules) | **The program consists of 10 (PM 2 consists of three, each dedicated to certain technologies) professional modules**:  PM 1 - “Engineering tools, simulation of digital production systems”  PM 2 - “Advanced technologies for digital production”  PM 3– “Robotic systems in digital production”  PM 4 - “Numerical control in digital production”  PM 5 - “Measurements in digital production”  PM 6 - “Intelligent Engineering of digital production systems”  PM 7 - “Implementation of digital production system elements”  PM 8 - “The reality and perspectives of the personnel on digital enterprises” |

**CURRICULUM**

**Professional Development Program for Engineering Personnel / or Mid-Level Technical Specialists**

**«Engineering of Digital Industrial Enterprises»**

Total workload of the program (hours) **32classroom hours**

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| **№** | **Module Title** | **Total in hours** | **Including** | | **Type of assessment** |
| **Classroom hours** | |
| **theory** | **tutorials** |
| 1 | 2 | 3 | 4 | 5 | 7 |
| 1 | Engineering tools, simulation of digital production systems | 3 | 2 | 1 | Case study |
| 2 | Advanced technologies for digital production | 3 | 2 | 1 | Case study |
| 3 | 3 | 2 | 1 | Case study |
| 4 | 3 | 2 | 1 | Case study |
| 5 | Robotic systems in digital production | 3 | 2 | 1 | Case study |
| 6 | Numerical control in digital production | 3 | 2 | 1 | Case study |
| 7 | Measurements in digital production | 3 | 2 | 1 | Case study |
| 8 | Intelligent engineering of digital production systems | 3 | 2 | 1 | Case study |
| 9 | Implementation of digital production system elements | 3 | 2 | 1 | Case study |
| 10 | The reality and perspectives of the personnel on digital enterprises | 3 | 2 | 1 | Case study |
|  | Final assessment | 2 | Х | Х | Final paper |
|  | **ИТОГО** | **32** | **20** | **10** |  |

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| The list of the main relevant competencies to be developed during the program | The ability to manage the risks of the digital environment and achieve success in it;  Formation of a knowledge system in the field of modern digital technologies actively used in various industries in order to improve enterprise management system and increase their efficiency:  The ability to analyze the processes of formation and risks of the digital environment, identifying trends in the development of key digital technologies. |
| Program duration and workload, classroom hours | 5 days (32 hours), online on-the-job training |
| **Tutorials** | |
| Tutorials duration and workload | 5 days (10 hours), online on-the-job training |
| Tutorials goal | Obtain practical experience (gain skills in performing labor actions)in   * applying effective approaches to the design of digital enterprises; * application of measurement systems in digital production * the use of advanced tools for organizing digital enterprises. |
| Objectives of tutorials | Get familiar with the digital enterprise design approaches.  Get acquainted with the advanced technologies, robotic systems and numerical control in digital production.  Get familiar with the measurement system in digital production. |
| Tutorials results | 1. Insight into the approaches to the digital enterprises design.  2. Understanding the role and perspectives of the staff in the terms of industrial enterprises digitalization  3. Understanding the advanced technologies use in digital production |
| Name of the hosting company | FSBEI HE "MGTU" STANKIN " |
| Addressщаthe host company | 127055, Moscow, Vadkovsky lane,3а, |
| Website of the hosting company | <http://www.stankin.ru/> |
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